Appendix 2

Text of Final Regulation (Clean Version)

SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.1
DEFINITIONS AND GENERAL REQUIREMENTS

SECTION I – DEFINITIONS

The following words and phrases when used in the Regulations and Standards shall, for the purpose of these regulations, have the meanings respectively ascribed to them in this section, unless a different meaning is clearly indicated. This section augments the South Carolina Pollution Control Act.

1. Acid Mist – Means mist or droplets of sulfuric or other acids. Sulfuric acid mist includes sulfur trioxide (SO_3) and sulfuric acid vapor as well as liquid mist.

2. Add – Means additions to a process which will increase size, scope, or emissions from such process.

3. Administrator – Means the Administrator of the United States Environmental Protection Agency (EPA) or his/her designee.

4. Afterburner – Means an auxiliary burner for destroying unburned or partially burned combustion gases after they have passed from the combustion chamber.

5. Air Curtain Incinerator – Means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which burning occurs. Incinerators of this type can be constructed above or below ground and require a refractory lined chamber or pit.

6. Alter – Means modification or change in a process or processes which would affect emissions to the atmosphere.

7. Ambient Air Quality Standards – Means the standard for the quality of ambient air at or beyond a property line on which a source of pollution is emitting.

8. Application – Means a form provided by the Department which is prescribed to provide the information required to grant approval to construct and operate a source or an incinerator; or to report an existing incinerator.

9. Biologicals – Means preparations made from living organisms and their products, including vaccines, cultures, etc., intended for use in diagnosing, immunizing, or treating humans or animals or in research pertaining thereto.

10. Blood Products – Means any product derived from human blood, including but not limited to blood plasma, platelets, red or white blood corpuscles, and other derived licensed products, such as interferon, etc.

11. Board – Means Board of Health and Environmental Control.

12. Body Fluids – Means liquid emanating or derived from humans and limited to blood; dialysate; amniotic, cerebrospinal, synovial, pleural, peritoneal, and pericardial fluids; and semen and vaginal secretions.

13. Boiler – Means an enclosed device using controlled flame combustion and having specific characteristics including the following:

a. The combustion chamber and primary energy recovery section shall be of integral design (for example, waste heat recovery boilers attached to incinerators are not boilers). To be of integral design, the combustion chamber and the primary energy recovery sections (such as water walls and super heaters) shall be physically formed into one (1) manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery sections are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not physically be formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from boilers solely because they are not of integral design: process heaters (units that transfer energy directly to a process stream) and fluidized bed combustion units; and

b. At least seventy-five (75) percent of recovered energy shall be "exported," for example, not used for internal uses like preheating of combustion air or fuel, or driving combustion air fans or feedwater pumps.

14. Bypass Stack – Means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

15. CAA – Means the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. Also referred to as "the Act."

16. Chemotherapeutic Waste – Means all waste resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells. Chemotherapeutic waste shall not include any waste containing antineoplastic agents that are listed as hazardous waste under Section 261 of Regulation 61-79, Hazardous Waste Management.

17. Clean Wood – Means untreated wood or untreated wood products including clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include yard waste, which is defined elsewhere in this section, or construction, renovation, and demolition waste (including but not limited to railroad ties and telephone poles).

18. Code of Federal Regulations (CFR) – Means the general and permanent rules codified and published in the Federal Register by the departments and agencies of the federal government.

19. Commercial Incinerator – Means an incinerator that burns non-hazardous waste from commercial activities with a design capacity of no more than 1250 pounds per hour (lb/hr) and which burns no more than six (6) tons per day (tons/day). Incinerators of this type not meeting these limits are considered municipal waste combustors. This definition does not include retail and industrial incinerators nor does it include waste from maintenance activities at commercial establishments.

20. Commissioner – Means the Commissioner (also known as the Director) of the Department of Health and Environmental Control.

21. Conditional Major Source – Means a stationary source that obtains a federally enforceable

physical or operational limitation from the Department to limit or cap the stationary source's potential to emit to avoid being defined as a major source as defined by applicable federal and state regulations.

22. Continuous Emission Monitoring System or CEMS – Means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility.

23. Continuous Program of Physical On-site Construction – Means significant and continuous site preparation work such as major clearing or excavation followed by placement of footings, pilings, and other materials of construction, assembly, or installation of unique facilities or equipment at the site of the source. With respect to a change in the method of operating, this term refers to those on-site activities, other than preparatory activities, which mark the initiation of the change.

24. Crematory Incinerator – Means any incinerator designed and used solely for the burning of human remains or animal remains.

25. Department – Means the South Carolina Department of Health and Environmental Control.

26. Dioxins/Furans – Means the combined emissions of tetra- through octa-chlorinated dibenzo-paradioxins and dibenzofurans, as measured by EPA Reference Method 23 (40 Code of Federal Regulations (CFR) 60, Appendix A).

27. Emission – Means a release or discharge to the outdoor (ambient) atmosphere of air contaminants, including fugitive emissions.

28. Emission Data – Means the definition contained in 40 CFR 2.301(a)(2), July 1, 1986, is incorporated by reference.

29. Emission Limitation (and Emission Standard) – Means a requirement established by the state or by the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

30. Federally Enforceable – Means all limitations and conditions which are enforceable by the Administrator and citizens under the Act, including those requirements developed pursuant to 40 CFR 60, 61, 63, and 70; requirements within the South Carolina State Implementation Plan (SIP); and any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51 Subpart I, including operating permits issued under an EPA-approved program that is incorporated into the SIP and expressly requires adherence to any permit issued under such program.

31. Fuel Burning Operation – Means use of a furnace, boiler, device, or mechanism used principally, but not exclusively, to burn any fuel for the purpose of indirect heating in which the material being heated is not contacted by and adds no substance to the products of combustion.

32. Fugitive Dust – Means a type of particulate emission that becomes airborne by forces of wind, man's activity, or both, including, but not limited to, construction sites, tilled land, materials storage piles, and materials handling.

33. Fugitive Emissions – Means emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

34. Garbage – Means animal and vegetable waste resulting from the handling, preparation, cooking,

and serving of foods.

35. Hazardous Air Pollutant (HAP) – Means a pollutant which is the subject of National Emission Standards for Hazardous Air Pollutants (NESHAP) promulgated by the EPA by publication in the Federal Register.

36. Hazardous Waste – Means any waste identified as such by Regulation 61-79.

37. Hazardous Waste Fuel – Means hazardous waste that has a heat value greater than 5000 British thermal unit per pound (Btu/lb) and is burned in an industrial or utility boiler or industrial furnace for energy recovery, except for hazardous wastes exempted by Section 266.30(b) of Regulation 61-79.

38. Hazardous Waste Incinerator – Means an incinerator whose primary function is to combust hazardous waste, except for devices which have qualified for exemption as provided in Sections 264.340(b) or 265.340(b) of Regulation 61-79.

39. Hospital – Means any facility which has an organized medical staff, maintains at least six (6) inpatient beds, and where the primary function of the institution is to provide diagnostic and therapeutic patient services and continuous nursing care primarily to human inpatients who are not related and who stay on average in excess of twenty-four (24) hours per admission. This definition does not include facilities maintained for the sole purpose of providing nursing or convalescent care to human patients who generally are not acutely ill but who require continuing medical supervision.

40. Hospital/Medical/Infectious Waste Incinerator or HMIWI or HMIWI Unit – Means any device that combusts any amount of hospital waste and/or medical/infectious waste.

41. Hospital Waste – Means discards generated at a hospital, except unused items returned to the manufacturer. The definition of hospital waste does not include human corpses, remains, and anatomical parts that are intended for interment or cremation.

42. Incinerator – Means any engineered device used in the process of controlled combustion of waste for the purpose of reducing the volume; removing the contamination and/or reducing or removing the hazardous potential of the waste charged by destroying combustible matter leaving the noncombustible ashes, material, and/or residue; and which does not meet the criteria nor classification as a boiler nor is listed as an industrial furnace.

43. Industrial Boiler – Means a boiler that produces steam, heated air, or other heated fluids for use in a manufacturing process.

44. Industrial Furnace – Means any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame devices to accomplish recovery of materials or energy:

a. Cement kilns

b. Lime kilns

c. Aggregate kilns

d. Phosphate kilns

e. Coke ovens

f. Blast furnaces

g. Smelting, melting, and refining furnaces (including pyrometallurgical devices such as tray furnaces, cupolas, reverberator furnaces, sintering machines, roasters, and foundry furnaces)

h. Titanium dioxide chloride process oxidation reactors

i. Methane reforming furnaces

j. Pulping liquor recovery furnaces

k. Combustion devices used in the recovery of sulfur values from spent sulfuric acid

l. Such other devices as the Department may determine on a case-by-case basis using one (1) or more of the following factors:

i. The design and use of the device primarily to accomplish recovery of material products;

ii. The use of the device to burn or reduce raw materials to make a material product;

iii. The use of the device to burn or reduce secondary materials as effective substitutes for raw materials in processes using raw materials as principal feedstocks;

iv. The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;

v. The use of the device in common industrial practice to produce a material product; and

vi. Other factors as appropriate.

45. Industrial Incinerator – Means any incinerator utilized in an industrial plant that does not meet the definition for any other type of incinerator or an incinerator used to combust Type 5 or 6 waste at any site.

46. In Existence – Means that the owner or operator has obtained all necessary construction permits required by this Department and either has:

a. Begun, or caused to begin, a continuous program of physical on-site construction of the source; or

b. Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the source to be completed in a reasonable time, or that the owner or operator possesses a valid operating permit for the source prior to the effective date of a regulation or standard.

47. Kraft Pulp Mill – Means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at a high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

48. Major Source – Means, except as otherwise provided, any source which directly emits, or has the potential to emit, greater than or equal to the major source threshold as defined by applicable federal and state regulations.

49. Malfunction – Means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions. During periods of malfunction, the operator shall operate within established parameters as much as possible, and monitoring of all applicable operating parameters shall continue until all waste has been combusted or until the malfunction ceases, whichever comes first.

50. Mass Emission Rate – Means the weight discharged per unit of time.

51. Medical/Infectious Waste – Means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals listed below; and any waste defined as infectious waste in Regulation 61-105, Infectious Waste Management. The definition of medical/infectious waste does not include hazardous waste identified or listed in Regulation 61-79.261; household waste, as defined in Regulation 61-79.261.4(b)(1); ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment or cremation; and domestic sewage materials identified in Regulation 61-79.261.4(a)(1).

a. Cultures and stocks of infectious agents and associated biologicals, including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.

b. Human pathological waste – tissues, organs, body parts, and body fluids that are removed during surgery or autopsy or other medical procedures, and specimens of body fluids and their containers.

c. Human blood and blood products including:

i. Liquid waste human blood;

ii. Products of blood;

iii. Items saturated and/or dripping with human blood; or

iv. Items that were saturated and/or dripping with human blood that are now caked with dried human blood; including serum, plasma, and other blood components, and their containers which were used or intended for use in either patient care, testing and laboratory analysis, or the development of pharmaceuticals. Intravenous bags are also included in this category.

d. Sharps – instruments used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.

e. Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary

hospitals), production of biologicals, or testing of pharmaceuticals.

f. Isolation wastes – biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from highly communicable diseases or isolated animals known to be infected with highly communicable diseases.

g. Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.

52. Multiple-Chamber Incinerator – Means an incinerator consisting of at least two (2) refractory lined combustion chambers (primary and secondary) in series, physically separated by refractory walls, interconnected by gas passage ports or ducts.

53. Municipal Solid Waste, MSW, or Municipal-type Solid Waste – a. Means household, commercial/retail, and/or institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities. Household, commercial/retail, and institutional wastes include:

i. Yard waste;

ii. Refuse-derived fuel; and

iii. Motor vehicle maintenance materials limited to vehicle batteries and tires.

b. Household, commercial/retail, and institutional waste (MSW) does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which includes, but is not limited to, railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes (including Type 5 or 6 waste); medical waste; radioactive contaminated waste; hazardous waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

54. Municipal Waste Combustor, MWC, or Municipal Waste Combustor Unit – Means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (for example, steam generating units) and furnaces (whether suspension-fired, grate-fired, mass-fired, or fluidized bed-fired, etc.), air curtain incinerators, and pyrolysis/combustion units. Municipal waste combustors do not include pyrolysis/combustion units located at plastics/rubber recycling units. Municipal waste combustors do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems. For the purpose of determining reconstruction or modification, as defined in 40 CFR 60 Subpart A, or Regulation 62.5, Standard No. 3, to a municipal waste combustor, the following applies:

a. The boundaries of a municipal solid waste combustor are defined as follows. The municipal waste combustor unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustor water system. The municipal waste combustor boundary starts at the municipal solid waste pit or hopper and extends through:

i. The combustor flue gas system, which ends immediately following the heat recovery equipment or, if there is no heat recovery equipment, immediately following the combustion chamber;

ii. The combustor bottom ash system, which ends at the truck loading station or similar ash handling equipment that transfers the ash to final disposal, including all ash handling systems that are connected to the bottom ash handling system; and

iii. The combustor water system, which starts at the feed water pump and ends at the piping exiting the steam drum or superheater.

b. The municipal waste combustor unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine-generator set.

55. NAICS Code – Means North American Industry Classification System (NAICS) Code, a six digit coding system, which attempts to classify all business establishments by the types of products or services they provide.

56. Non-Industrial Boiler – Means any boiler not classified as an industrial boiler.

57. Non-Industrial Furnace – Means any furnace not classified as an industrial furnace.

58. Non-Spec. Oil (Off-Spec. Oil) – See definition of used oil.

59. Opacity – Means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

60. Open Burning – Means any fire or smoke-producing process which is not conducted in any boiler plant, furnace, high temperature processing unit, incinerator or flare, or in any other such equipment primarily designed for the combustion of fuel or waste material.

61. Part 70 Permit – Means any permit or group of permits covering a source subject to the permitting requirements of Regulation 61-62.70. The use of the term “Title V Permit” shall be construed to mean “Part 70 Permit.”

62. Particulate Matter – Means any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

63. Particulate Matter Emissions – Means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by an applicable reference method described in 40 CFR 60, July 1, 1987, or an equivalent or alternative method approved by the Department, with the concurrence of the EPA.

64. Pathological Waste – Means waste material consisting of only human or animal remains, anatomical parts, and/or tissue; the bags/containers used to collect and transport the waste material; and animal bedding (if applicable).

65. Plant – Means, except as otherwise provided, any stationary source or combination of stationary sources, which is located on one (1) or more contiguous or adjacent properties and owned or operated by the same person(s) under common control.

66. Plastics/Rubber Recycling Unit – Means an integrated processing unit where plastics, rubber,

and/or rubber tires are the only feed materials (incidental contaminants may be included in the feed materials) and they are processed into a chemical plant feedstock or petroleum refinery feedstock where the feedstock is marketed to and used by a chemical plant or petroleum refinery as input feedstock. The combined weight of the chemical plant feedstock and petroleum refinery feedstock produced by the plastics/rubber recycling unit on a calendar quarter basis shall be more than seventy (70) percent of the combined weight of the plastics, rubber, and rubber tires processed by the plastics/rubber recycling unit on a calendar quarter basis. The plastics, rubber, and/or rubber tire feed materials to the plastics/rubber recycling unit may originate from the separation or diversion of plastics, rubber, or rubber tires from MSW or industrial solid waste; and may include manufacturing scraps, trimmings, off-specification plastics, rubber, and rubber tire discards. The plastics, rubber, and rubber tire feed materials to the plastics/rubber recycling unit may contain incidental contaminants (for example, paper labels on plastic bottles, metal rings on plastic bottle caps, etc.).

67. $PM_{2.5}$ – Means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers emitted to the ambient air as measured by a reference method based on Appendix L of 40 CFR 50 and designated in accordance with 40 CFR 53 or by an equivalent method designated in accordance with 40 CFR 53.

68. $PM_{2.5}$ Emissions – Means finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers emitted to the ambient air as measured by a reference method approved by the Department with concurrence of the EPA.

69. PM_{10} – Means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on Appendix J of 40 CFR 50 and designated in accordance with 40 CFR 53 or by an equivalent method designated in accordance with 40 CFR 53.

70. PM_{10} Emissions – Means finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by a reference method approved by the Department with concurrence of the EPA.

71. Potential to Emit – Means the maximum capacity of a source to emit a regulated pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a regulated pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a source.

72. Process Industry – Means any source engaged in the manufacture, processing, handling, treatment, forming, storing, or any other action upon materials except fuel-burning operations.

73. Process Weight – Means the total weight of all materials introduced into a source operation, including air and water where these materials become an integral part of the product and solids used as fuels, but excluding liquids and gases used solely as fuels.

74. Process Weight Rate – a. Means a rate established as follows:

i. For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

ii. For cyclical or batch unit operations or unit processes, the total process weight for a period

that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

b. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.

75. Pyrolysis/Combustion Unit – Means a unit that produces gases, liquids, or solids through the heating of waste; and the gases, liquids, or solids produced are combusted and emissions vented to the atmosphere.

76. Refuse – Means garbage, rubbish, and/or trade waste.

77. Refuse-derived Fuel – Means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including low-density fluff refuse-derived fuel through densified refuse-derived fuel and pelletized refuse-derived fuel.

78. Retail Business Type Incinerator – Means an incinerator that combusts waste typical of a retail business rather than domestic, commercial, or industrial activities.

79. Rubbish – Means solid wastes from residences and dwellings, commercial establishments, and institutions.

80. Salvage Operations – Means any operation of a business, trade, or industry engaged in whole or in part in salvaging or reclaiming any product or material including, but not limited to, metals, chemicals, shipping containers, drums, or automobiles.

81. Secondary Emissions – Means emissions which would occur as a result of the construction or operation of a major source or major modification but do not come from the major source or major modification itself. Secondary emissions shall be specific, well defined, quantifiable, and shall impact the same general area as the source or modification which causes the secondary emissions. Secondary emissions may include, but are not limited to:

a. Emissions from ships or trains moving to or from the new or modified source.

b. Emissions from any offsite support operation which would not otherwise be constructed or increase its emissions as a result of the construction or operation of the major source or major modification.

82. SIC Code – Means Standard Industrial Classification Codes which are four digit numerical codes designed by the U.S. Department of Labor in order to create uniform descriptions of business establishments.

83. Sludge Incinerator – Means an incinerator that combusts wastes containing more than ten (10) percent (dry weight basis) sludge produced by municipal or industrial wastewater treatment plants or each incinerator that charges more than 2205 pounds per day (lb/day) (dry weight basis) of sludge produced by municipal or industrial wastewater treatment plants.

84. Smoke – Means small gasborne and airborne particles arising from a process of combustion in sufficient number to be observable by a person of normal vision under normal conditions.

85. Solid Fuel – Means a fuel which is fired as a solid such as coal, lignite, and wood.

86. Spec. Oil – See definition of used oil.

87. Stack – Means any flue, conduit, chimney, or opening arranged to conduct an effluent into the open air.

88. Stack Height – Means the vertical distance measured in feet between the point of discharge from the stack or chimney into the outdoor atmosphere and the elevation of the land thereunder.

89. Standard Conditions – Means 760 millimeters of mercury (mmHg) at twenty-five (25) degrees Centigrade (C).

90. Stationary Source – Means any building, structure, installation, or process which emits or may emit an air pollutant subject to regulation by any national or state standard. Use of the term "source" is to be construed to mean "stationary source."

91. Substantial Loss – Means, generally, a loss which would equal or exceed ten (10) percent of the total initial project cost.

92. Synthetic Minor Source – Means a stationary source that obtains a federally enforceable physical or operational limitation from the Department to limit or cap the stationary source's potential to emit to avoid being defined as a major source or major modification, as defined by applicable federal and state regulations.

93. Total Reduced Sulfur (TRS) – Means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide that are released during the kraft pulping operation.

94. Total Suspended Particulate (TSP) – Means particulate matter as measured by the method described in Appendix B, 40 CFR 50, July 1, 1987.

95. Trade Waste – Means all solid, liquid, or gaseous material or rubbish resulting from construction, building operations, or the prosecution of any business, trade, or industry including, but not limited to, plastic products, cartons, paint, grease, oil and other petroleum products, chemicals, and cinders.

96. Untreated Lumber – Means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or "pressure-treated." Pressure-treating compounds include, but are not limited to, chromate copper arsenate, pentachlorophenol, and creosote.

97. Used Oil – Means any oil that has been refined from crude or synthetic oil and as a result of use, storage, or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which may be suitable for further use and may be economically recyclable. This also includes absorbent material contaminated with used oil such as oily rags or absorbent blankets. Two (2) types of used oil are defined as follows:

a. Spec. Oil (Specification Oil) – Used oil that meets the following specifications: *

i. Arsenic – 5 parts per million (ppm) maximum;

ii. Cadmium – 2 ppm maximum;

iii. Chromium – 10 ppm maximum;
iv. Lead – 100 ppm maximum;

v. Nickel – 120 ppm maximum;

vi. Total halogens – 4000 ppm maximum; and**

vii. Flash Point – 100 degrees Fahrenheit (F) (37.8 degrees C) minimum.

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* This specification does not apply to used oil fuel mixed with a hazardous waste.

** Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste. The burden of proof that this is not true rests with the user.

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b. Non-Spec. Oil (Off-Spec. Oil) – Used oil that does not meet the specification above.

98. Utility Boiler – Means a boiler that produces steam, heated air, or other heated fluids for sale or for use in producing electric power for sale.

99. Virgin Fuel – Means unused solid, liquid, or gaseous commercial fuel, and clean wood or bark that has not been processed other than for size reduction excluding clean wood or bark burned in an air curtain incinerator.

100. Volatile Organic Compound (VOC) – a. Means any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method (as specified in 40 CFR 60, as of July 1, 1990), an equivalent method, an alternative method, or which is determined by procedures specified under any subpart of 40 CFR 60. This definition does not include compounds that have negligible photochemical reactivity according to the methods employed by the EPA to determine compounds listed in 40 CFR 51.100(s).

b. For purposes of determining compliance with emission limits, VOCs will be measured by the approved test methods. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

c. The following compound(s) are VOCs for purposes of all recordkeeping, emissions reporting, photo-chemical dispersion modeling, and inventory requirements which apply to VOCs and shall be uniquely identified in emission reports, but are not VOCs for purposes of VOC emissions limitations or VOC content requirements: t-butyl acetate (TBAC or TBAc).

101. Waste – Means any discarded material including, but not limited to, used oil, hazardous waste fuel, hazardous waste, medical waste, municipal solid waste (MSW), sludge, waste fuel, and waste classification Types 0 through 6 or any material which as a result of use, storage, or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties.

a. Type 0 – Trash, a mixture of highly combustible waste such as paper, cardboard, wood boxes, and combustible floor sweepings from commercial and industrial activities. The mixture contains up to

ten (10) percent by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags, and plastic or rubber scraps.

Typical composition: ten (10) percent moisture, five (5) percent incombustible solids, and has a heating value of approximately 8500 Btu/lb as fired.

b. Type 1 – Rubbish, a mixture of combustible waste such as paper, cardboard cartons, wood scrap, foliage, and combustible floor sweepings from domestic, commercial, and industrial activities. The mixture contains up to twenty (20) percent by weight of restaurant or cafeteria waste, but contains little or no treated paper, plastic, or rubber wastes.

Typical composition: twenty-five (25) percent moisture, ten (10) percent incombustible solids, and has a heating value of approximately 6500 Btu/lb as fired.

c. Type 2 – Refuse, consisting of an approximately even mixture of rubbish and garbage by weight. This type of waste is common to apartment and residential occupancy.

Typical composition: up to fifty (50) percent moisture, seven (7) percent incombustible solids, and has a heating value of approximately 4300 Btu/lb as fired.

d. Type 3 – Garbage, consisting of animal and vegetable wastes from restaurants, cafeterias, hotels, hospitals, markets, and like installations.

Typical composition: up to seventy (70) percent moisture, up to five (5) percent incombustible solids, and has a heating value of approximately 2500 Btu/lb as fired.

e. Type 4 – Human and animal remains, consisting of carcasses, organs, and solid organic wastes from hospitals, laboratories, abattoirs, animal pounds, and similar sources.

Typical composition: up to eighty-five (85) percent moisture, five (5) percent incombustible solids, and having a heating value of approximately 1000 Btu/lb as fired.

f. Type 5 – By-product waste, gaseous, liquid, or semi-liquid, such as tar, paints, solvents, sludge, fumes, etc., from industrial operations. Btu values shall be determined by the individual materials to be destroyed.

g. Type 6 – Solid by-product waste, such as rubber, plastics, wood waste, etc., from industrial operations. Btu values shall be determined by the individual materials to be destroyed.

102. Waste Fuel – Means waste that does not meet hazardous waste criteria but has a heat value greater than 5000 Btu /lb.

103. Yard Waste – Means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs that are generated by residential, commercial/retail, institutional, and/or industrial sources as part of maintenance activities associated with yards or other private or public lands. Yard waste does not include construction, renovation, and demolition wastes, which are exempt from the definition of MSW in this section. Yard waste does not include clean wood, which is also exempt from the definition of MSW in this section.

SECTION II – PERMIT REQUIREMENTS

The following regulation will not supersede any state or federal requirements nor special permit conditions, unless this regulation would impose a more restrictive emission limit. The owner or operator shall comply with all terms, conditions, and limitations of any Department-issued permit for sources or activities at the owner or operator's facility. A source's permit status may change upon promulgation of new regulatory requirements.

A. Construction Permits

1. Applicability

a. Except as allowed under Section II.A.1.b and A.1.c below, any person who plans to construct, alter, or add to a source of air contaminants, including installation of any device for the control of air contaminant discharges, shall first obtain a construction permit from the Department prior to commencement of construction.

b. The Department may grant permission to proceed with minor alterations or additions without issuance of a construction permit when the Department determines that the alteration or addition will not increase the quantity and will not alter the character of the source's emissions.

c. The owners or operators of sources not requesting to use federally enforceable construction permit conditions to limit potential to emit, sources not subject to regulations with more stringent start of construction limitations, or sources not otherwise exempt from permit requirements, may undertake the following on-site activities prior to obtaining a construction permit:

i. Planning;
ii. Engineering and design;
iii. Geotechnical investigation;
iv. Site land clearing and grading;
v. Setting up temporary trailers to house construction staff and contractor personnel;
vi. Ordering of equipment and materials;
vii. Receipt and storing of equipment;
viii. Pouring of the foundation up to and including the mounting pads and slab on grade;
ix. Relocation of utilities;
x. For existing sources, relocation/installation of piping, electrical service, and instrumentation;
xi. Temporary power for the site (such as power lines);
xii. Site drainage including ditches and culverts;
xiii. Temporary dewatering activities associated with the excavations;
xiv. Temporary gravel (Right Out of Crusher (ROC)) road beds for the site;
xv. Soil only excavations;
xvi. Temporary telecommunications for the site (such as telephone and internet); and
xvii. Security fencing related to the storage of equipment and materials.

d. In the event that the source does not qualify for issuance of a construction permit, the owners or operators accept the financial risk of commencing the activities listed in Section II.A.1.c.i through A.1.c.xvii above.

2. No permit to construct or modify a source will be issued if emissions interfere with attainment or maintenance of any state or federal standard.

3. The owner or operator shall submit written notification to the Department of the date construction is commenced, postmarked within thirty (30) days after such date, and written notification of the actual

date of initial startup of each new or altered source, postmarked within fifteen (15) days after such date.

4. Approval to construct shall become invalid if construction:

a. Is not commenced within eighteen (18) months after receipt of such approval;

b. Is discontinued for a period of eighteen (18) months or more; or

c. Is not completed within a reasonable time as deemed by the Department.

5. The Department may extend the construction permit for an additional 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen (18) months of the projected and approved commencement date.

B. Exemptions from the Requirement to Obtain a Construction Permit

1. No construction permits shall be required for the sources listed in Section II.B.1.a through B.1.c below, which burn virgin fuel and which were constructed prior to February 11, 1971, and which are not located at a facility that meets the definition of a major source as defined in Regulation 61-62.70.2(r); however, modifications at these facilities may trigger the requirement to obtain a construction permit.

a. Natural gas boilers.

b. Oil-fired boilers of 50 x 10^6 British thermal unit per hour (Btu/hr) rated input capacity or smaller.

c. Coal-fired boilers of 20 x 10^6 Btu/hr rated input capacity or smaller.

2. No construction permits shall be required for the sources listed in Section II.B.2.a through B.2.h below, unless otherwise specified by Regulation 61-62.70 or any other state or federal requirement. A source's exemption status may change upon the promulgation of new regulatory requirements applicable to any of the sources listed in Section II.B.2.a through B.2.g, or to any other sources that have been determined to have total uncontrolled emissions less than the thresholds in Section II.B.2.h, or to any similar sources that have been granted an exemption by the Department.

a. Boilers and space heaters of less than 1.5 x 10^6 Btu/hr rated input capacity which burn only virgin liquid fuels or virgin solid fuels.

b. Boilers and space heaters of less than 10 x 10^6 Btu/hr rated input capacity which burn only virgin gas fuels.

c. Comfort air-conditioning or ventilation systems.

d. Motor vehicles.

e. Laboratory hoods.

f. Emergency power generators as described below:

i. Generators of less than or equal to 150 kilowatt (kW) rated capacity.

ii. Generators of greater than 150 kW rated capacity designated for emergency use only and are operated a total of 500 hours per year or less for testing and maintenance and have a method to record the actual hours of use such as an hour meter.

g. Sources emitting only steam, air, nitrogen, oxygen, carbon dioxide, or any physical combination of these.

h. Sources with a total uncontrolled potential to emit (PTE) of less than five (5) tons per year each of particulates, sulfur dioxide, nitrogen oxides, and carbon monoxide; and a total uncontrolled PTE of less than 1000 pounds per month (lbs/month) of VOCs will not require construction permits. Unless otherwise exempt, sources may be exempted under this section at higher emission levels if there is a demonstration that there are no applicable limits or requirements. These applicable requirements include federally applicable limits or requirements. However, these sources may be required to be included in any subsequent construction or operating permit review to ensure that there is no cause or contribution to an exceedance of any ambient air quality standard or limit. For toxic air pollutant exemptions, refer to Regulation 61-62.5, Standard No. 8. Emissions calculations and any other information necessary to document qualification for this exemption must be maintained onsite and provided to the Department upon request.

3. The Department will place the exempt sources listed in Section II.B.2.a through B.2.g above, and other sources that have been determined will not interfere with the attainment or maintenance of any state or federal standard, on a list of sources to be exempted without further review. The Department may develop emission thresholds for exemption that have been determined will not interfere with the attainment or maintenance of any state or federal standard, to be maintained with the list of sources to be exempted without further review. This list of sources and source emission thresholds that are exempt without further review from the requirement to obtain a construction permit will be maintained by the Department and periodically published in the South Carolina State Register for use by the public and the regulated community. Requests to the Department may be made to add sources to the list.

4. Sources with only fugitive emissions must submit source information, and the need for permit(s) will be made by the Department on a case-by-case basis. This determination will take into consideration, but will not be limited to, the nature and amount of the pollutants, location, proximity to residences and commercial establishments, etc.

5. Sources of VOCs greater than 1000 lbs/month may not require a permit. This determination will take into consideration, but will not be limited to, applicability to state and federal requirements. No waiver will be permissible if federal requirements apply unless otherwise exempt. Emissions calculations and any other information necessary to document qualification for this exemption and the need for permit(s) will be made by the Department on a case-by-case basis. Exempt sources of VOCs may be required to be included in any subsequent construction or operating permit review to ensure that there is no cause or contribution to an exceedance of any ambient air quality standard or limit.

6. Requests for exemption from the requirement to obtain a construction permit, for new sources similar to sources already on the Department maintained list established in Section II.B.3 above, or for modifications to existing equipment, including the reconstruction, relocation, and replacement of existing equipment, which may qualify for exemption as per Section II.B.2.h and Section II.B.4 above, shall include the following information:

a. A complete description of the existing equipment and proposed modification;

b. The pollutant(s) being emitted and any deviation from the parameters provided in earlier permit applications, permit exemptions, and issued permits;

c. Any ambient air quality demonstrations needed for Regulation 61-62.5, Standards No. 2, No. 7, and No. 8; and

d. A regulatory review to demonstrate the project is not a CAA Title I modification nor subject to Regulation 61-62.5, Standards No. 7 and No. 7.1.

7. The construction permitting exemptions in Section II.B do not relieve the owner or operator of any source from any obligation to comply with any other applicable requirements. The Department reserves the right to require a construction permit, and the need for permit(s) will be made by the Department on a case-by-case basis. This determination will take into consideration, but will not be limited to, the nature and amount of the pollutants, location, proximity to residences and commercial establishments, etc.

C. Construction Permit Applications

1. Construction permit applications shall be reviewed and signed by a professional engineer registered to practice in the State of South Carolina (except professional engineers employed by the federal government preparing applications for the federal government or other professional engineers exempted from the state registration requirements).

2. The following are exempt from the requirement that the construction permit applications be reviewed and signed by a registered professional engineer provided the proposed unit is identical to a prototype model which has been previously designed or otherwise certified by a professional engineer:

a. Package-type incinerators of 750 lb/hr rated capacity or smaller which burn Types 0 and 1 wastes as defined by the Incinerator Institute of America;

b. Package-type incinerators of 500 lb/hr rated capacity or smaller which burn animal remains excluding those remains that are considered infectious waste; and

c. Package-type boilers of 100 x 10^6 Btu/hr input capacity or smaller which burn natural gas or virgin oil as fuel.

3. Construction permit applications shall provide the information described in Section II.C.3.a through C.3.p. This information should be submitted on Department forms, but project specific information may need to be provided in addition to that requested in applicable forms.

a. The facility name; and the name, mailing address, and telephone number of the owner or operator for the facility;

b. The location of the facility including its street address and the name, mailing address, and telephone number of the facility's contact person;

c. The facility's Federal Employer Identification Number or Federal Tax ID Number;

d. A description and the U. S. Standard Industrial Classification (SIC) Code and North American Industry Classification System (NAICS) Code of the products or product lines to be produced by the proposed sources covered by this application;

e. The facility's planned operating schedules;

f. A description of the facility's proposed new or altered processes, including the physical and chemical properties and feed rate of the materials used and produced (in pounds per hour), from which the facility determined potential emissions;

g. A process flow diagram/production process layout of all new or altered sources showing the flow of materials and intermediate and final products. The process flow diagram/production process layout must identify all equipment, machines, and process steps or product lines within the production process; all product streams; all exhaust streams (emission points) including fugitive within the production process; all waste streams; and all control devices including inherent process control devices used within the production process;

h. A detailed description of each proposed or existing source that is being altered, including the size and type along with the make and model of the source and any associated air pollution control equipment;

i. A description, including physical and chemical properties and the Chemical Abstract Service (CAS) number (if applicable), of all emissions from each proposed source or existing source that is being altered. Mass emission data and emission calculations, including the potential uncontrolled and controlled mass emission rate of each criteria pollutant and other air contaminants such as VOCs, toxic air pollutants (TAPs), and HAPs, that will be emitted from each source covered by the application. Emission calculations must be based on proper documentation that supports the basis of the emission rates such as stack test data, AP-42 emission factors, material balance, and/or engineering estimates. All assumptions used in the emission calculations must be provided. Fugitive emissions (for example, emissions from filling operations, pumps, valves, flanges, etc.) must be included in the emission calculations;

j. A description of all air pollution control devices or systems on the new or altered sources, whether inherent or add-on. The description shall include, but not be limited to, the manufacturer specifications and ratings, the engineering design and operating characteristics, the projected capture and destruction, the control or removal efficiencies at expected contaminant loading levels, and the monitoring data collection and recordkeeping necessary to ensure proper operation of the air pollution control devices;

k. Source information and calculations to demonstrate compliance with “Good Engineering Practice Stack Height” rules;

l. A description of each stack or vent related to the proposed and/or existing source(s), including the minimum anticipated height above ground, maximum anticipated internal dimensions, discharge orientation, exhaust volume flow rate, exhaust gas temperature, and rain protection device, if any;

m. Scale drawings showing a plan view of the property lines, the location of the source, all stacks, and other emission points related to the source, as well as buildings that might affect dispersion of any emissions;

n. An air dispersion modeling analysis or other information demonstrating that emissions from the facility, including those in the application, will not interfere with the attainment or maintenance of any ambient air quality standard;

o. A summary of facility-wide potential uncontrolled and controlled emissions with a regulatory applicability determination; and

p. Other information as may be necessary for proper evaluation of the source as determined by the

Department.

D. General Construction Permits

1. The Department may develop and issue general construction permits applicable to similar sources for new construction projects or minor modifications to existing sources.

2. General construction permits shall incorporate all requirements applicable to the construction of similar sources and shall identify criteria by which sources may qualify for coverage under a general construction permit.

3. Sources may submit a construction permit application to the Department with a request for coverage under the conditions and terms of a general construction permit for similar sources. The Department shall grant a general construction permit to sources certifying qualification for and agreeing to the conditions and terms of a general construction permit for similar sources.

4. Sources shall be subject to enforcement action for operation without a valid permit if a source is later determined not to qualify for coverage under a general construction permit.

5. The Department may grant a source's request for authorization to operate under a general construction permit, but such a grant shall be a final permit action for purposes of judicial review.

6. The permit application for general construction permits may deviate from the requirements of Section II.C above, provided that such application includes all information necessary to determine qualification for, and to assure compliance with, the general permit.

7. A source that qualifies for coverage under a Department issued general construction permit may submit a construction permit application to the Department and request an individual construction permit in lieu of coverage under a general construction permit.

E. Synthetic Minor Construction Permits

1. General Provisions

a. Any stationary source may request to use federally enforceable permit conditions to limit the source’s potential to emit and become a synthetic minor source.

b. Stationary sources requesting a synthetic minor construction permit shall submit a complete permit application package to the Department as prescribed by Section II.E.5 below.

c. Stationary sources requesting a synthetic minor construction permit shall undergo the public participation procedures of Section II.N below.

d. The Department shall act, within a reasonable time, on an application for a synthetic minor construction permit and shall notify the applicant in writing of its approval, conditional approval, or denial.

e. In the event of a denial of a synthetic minor construction permit application, the Department shall notify the applicant in writing of the reasons for the denial. The Department shall not accept a subsequent synthetic minor construction permit application until the applicant has addressed the concerns specified by the Department which caused the denial. The source shall correct all deficiencies noted by

the Department within sixty (60) calendar days of receiving notice of the denial, or submit a complete major source construction permit application, as prescribed by Section II.C above, if the source desires to proceed with the project.

2. New Sources and Modifications

a. A stationary source desiring to restrict its potential to emit shall submit a written request to the Department for a federally enforceable construction permit conditioned to constrain the operation of the source, along with a completed construction permit application package as prescribed by Section II.E.5 below. The construction of the new or modified source shall not commence until the source has received an effective permit to construct.

b. The owner or operator shall submit written notification to the Department of the date construction is commenced, postmarked within thirty (30) days after such date, and written notification of the actual date of initial startup of each new or altered source, postmarked within fifteen (15) days after such date. A written request to obtain an operating permit shall be submitted to the Department within fifteen (15) days after the actual date of initial startup of each new or altered source in accordance with Section II.F below. A satisfactory compliance inspection by a Department representative may precede the issuance of an operating permit for any newly constructed or modified source.

3. Synthetic Minor Construction Permit Conditions

a. Synthetic minor construction permits shall contain the standard permit conditions listed in Section II.J.1 below and any special permit conditions required to verify a source's compliance with the emissions limitations and operational requirements.

b. The limitations and requirements listed as permit conditions shall be permanent, quantifiable, or otherwise enforceable as a practical matter.

c. All synthetic minor construction permit conditions that constrain the operation of a source in an effort to limit potential to emit below major source threshold levels shall be federally enforceable. Unless otherwise agreed by the Department and EPA, the Department shall provide to EPA on a timely basis a copy of each proposed (or draft) and final permit intended to be federally enforceable.

4. General Synthetic Minor Construction Permits

a. The Department may, after notice and opportunity for public participation provided under Section II.N below, issue a general synthetic minor construction permit applicable to similar sources.

b. Any general synthetic minor construction permit shall incorporate all requirements applicable to the construction of similar synthetic minor sources and shall identify criteria by which sources may qualify for the general permit.

c. Sources may submit a permit application to the Department with a request for coverage under the conditions and terms of a general synthetic minor construction permit for similar sources. The Department shall grant the general synthetic minor construction permit to sources certifying qualification for and agreeing to the conditions and terms of the general synthetic minor construction permit for similar sources.

d. The source shall be subject to enforcement action for operation without a valid permit if the source is later determined not to qualify for the conditions and terms of the general synthetic minor

construction permit.

e. The Department may grant a source's request for authorization to operate under a general permit without further public notice, but such a grant shall be a final permit action for purposes of judicial review.

f. The Department shall provide timely notice to the public of any authorization given to a facility to operate under the terms of a general permit. Such notice may be made on a periodic, summarized basis covering all facilities receiving authorization since the last notice.

5. Requirements for Synthetic Minor Construction Permit Applications

a. In addition to the minimum information required by Section II.C.3 above, any facility applying for a synthetic minor construction permit must also provide the following:

i. Potential emission calculations and proposed federally enforceable emission limitations for each emission unit at the facility verifying that the total emissions at the facility will be below the major source (or facility) thresholds;

ii. All proposed production and/or operational limitations that will constrain the operation of each emission unit that are to be identified as federally enforceable; and

iii. All proposed monitoring parameters, recordkeeping, and reporting requirements the applicant will use to determine and verify compliance with the requested federally enforceable limitations on a continuous basis. The applicant shall also provide the compliance status of these proposed parameters and requirements at the time of the application submittal.

b. The permit application for general synthetic minor construction permits may deviate from the requirements of Section II.E.5.a provided that such application includes all information necessary to determine qualification for, and to assure compliance with, the general permit.

F. Operating Permits

1. The owner or operator shall submit written notification to the Department of the actual date of initial startup of each new or altered source, postmarked within fifteen (15) days after such date. Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of this section.

2. The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department. If construction is certified as provided above, the owner or operator may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department. If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.

3. Request for a New or Revised Operating Permit

a. For sources covered by an effective Title V operating permit, the modification request required by Regulation 61-62.70 shall serve as the request to operate for the purposes of this regulation.

b. For sources not subject to Regulation 61-62.70, or not yet covered by an effective Title V operating permit, the owner or operator shall submit a written request for a new or revised operating permit to cover any new, or altered source, postmarked within fifteen (15) days after the actual date of initial startup of each new or altered source.

c. The written request for a new or revised operating permit must include, at a minimum, the following information:

i. A list of sources that were placed into operation; and

ii. The actual date of initial startup of each new or altered source.

G. Conditional Major Operating Permits

1. The requirements of Section II.G shall apply to those sources that request a federally enforceable permit to limit their potential to emit to less than major source thresholds.

2. General Provisions

a. Any stationary source that satisfies the definition of a major source may request a federally enforceable conditional major operating permit to limit the source's potential to emit and become a conditional major source. Any stationary source that has received a synthetic minor construction permit to limit the source's potential to emit below major source threshold levels, that is not required to obtain a Title V operating permit, shall be issued a conditional major operating permit to consolidate the source's limitations on potential to emit and shall be considered a conditional major source.

b. Stationary sources requesting a conditional major operating permit shall submit a complete request for a new or revised operating permit to the Department as required by Section II.G.6 below.

c. Stationary sources requesting an original conditional major operating permit shall undergo the public participation procedures of Section II.N below.

d. Submission of a request for renewal meeting the requirements in Section II.H below, shall allow the owner or operator to continue operating pursuant to the most recent conditional major operating permit until such time as the Department has taken final action on the request for renewal.

e. The Department shall act on a request for a conditional major operating permit and shall notify the source in writing of its approval, conditional approval, or denial.

f. In the event of a denial of a conditional major operating permit request, the Department shall notify the source in writing of the reasons for the denial. The Department shall not accept a subsequent conditional major operating permit request until the source has addressed the concerns specified by the Department which caused the original denial. The source shall correct all deficiencies noted by the Department or submit a complete permit application in accordance with Regulation 61-62.70 in order to receive a Title V operating permit.

3. Existing Sources

a. Any owner or operator desiring to be permitted as a conditional major source shall submit an operating permit request containing the information identified in Section II.G.6 below. A federally enforceable conditional major operating permit shall constrain the operations of the source such that potential emissions fall below applicable regulatory levels and therefore exclude the source from the requirements to have a Title V operating permit.

b. A request for a conditional major operating permit shall not relieve a source from the requirement to meet the deadline for submittal of a Title V operating permit application.

4. New or Modified Sources

a. Any owner or operator who plans to construct, alter, or add to a source of air contaminants, including the installation of any device for the control of air contaminant discharges, and desires a conditional major operating permit shall provide a written request to the Department for a federally enforceable synthetic minor construction permit conditioned to constrain the operation of the source, along with a complete construction permit application package containing the information identified in Section II.G.6 below. The construction of the new or modified source shall not commence until the source has received an effective permit to construct from the Department.

b. A written request to obtain a conditional major operating permit shall be submitted to the Department, postmarked within fifteen (15) days after the actual date of initial startup of each new or altered source. This request shall include any additional information required in Section II.G.6 below. These facilities will be issued conditional major operating permits without further public notice if no substantive changes to limitations are required. A satisfactory compliance inspection by a Department representative may precede the issuance of an operating permit for any newly constructed or modified source.

5. Conditional Major Operating Permit Conditions

a. Conditional major operating permits shall contain the standard permit conditions listed in Section II.J.1 below, and any special permit conditions required to verify a source's compliance with the emissions limitations and operational requirements.

b. The limitations and requirements listed as permit conditions shall be permanent, quantifiable, or otherwise enforceable as a practical matter.

c. All conditional major operating permit conditions that constrain the operation of a source in an effort to limit potential to emit below major source threshold levels as defined in Regulation 61-62.70 shall be federally enforceable. Unless otherwise agreed by the Department and EPA, the Department shall provide to EPA on a timely basis a copy of each proposed (or draft) and final permit intended to be federally enforceable.

6. Additional Requirements for Conditional Major Operating Permit Requests

a. In addition to the minimum information required by Section II.C.3 above, any facility requesting a conditional major operating permit must also provide the following:

i. Potential emission calculations and proposed federally enforceable emission limitations for each emission unit at the facility verifying that the total emissions at the facility will be below the major

source (or facility) thresholds;

ii. All proposed production and/or operational limitations that will constrain the operation of each emission unit that are to be identified as federally enforceable; and

iii. All proposed monitoring parameters, recordkeeping, and reporting requirements the source will use to determine and verify compliance with the requested federally enforceable limitations on a continuous basis. The source shall also provide the compliance status of these proposed parameters and requirements at the time of the request submittal.

b. The request for general conditional major operating permits may deviate from the requirements of Section II.G.6 provided that such request includes all information necessary to determine qualification for, and to assure compliance with, the general permit.

7. General Conditional Major Operating Permits

a. The Department may, after notice and opportunity for public participation provided under Section II.N below, issue a general conditional major operating permit applicable to similar sources.

b. Any general conditional major operating permit shall incorporate all requirements applicable to the operation of similar conditional major sources and shall identify criteria by which sources may qualify for a general permit.

c. Sources may submit a permit application to the Department with a request for coverage under the conditions and terms of a general conditional major operating permit for similar sources. The Department shall grant a general conditional major operating permit to sources certifying qualification for and agreeing to the conditions and terms of a general conditional major operating permit for similar sources.

d. The source shall be subject to enforcement action for operation without a valid permit if the source is later determined not to qualify for the conditions and terms of a general conditional major operating permit.

e. The Department may grant a source's request for authorization to operate under a general permit without further public notice, but such a grant shall be a final permit action for purposes of judicial review.

f. The Department shall provide timely notice to the public of any authorization given to a facility to operate under the terms of a general permit. Such notice may be made on a periodic, summarized basis covering all facilities receiving authorization since the last notice.

H. Operating Permit Renewal Requests

1. Any source that wishes to have its operating permit renewed must submit a written request to the Department.

2. The provisions of Section II.H shall apply only to those sources not subject to Regulation 61-62.70. For sources covered by an effective Title V operating permit, the operating permit renewal request required by Regulation 61-62.70 shall serve as the request to operate for the purposes of this regulation.

3. For sources not subject to Regulation 61-62.70, the owner or operator shall submit an operating permit renewal request to the Department within ninety (90) days prior to the operating permit expiration

date. The source may be inspected by the Department in order to decide whether to renew the permit. Past records of compliance and future probability of compliance will be considered in making the decision regarding renewal.

4. Operating permit renewal requests shall include a description of any changes at the facility that have occurred since issuance of the last operating permit that may affect the operating permit or operating permit review. In general, the description shall include any addition, alteration, or removal of sources, including sources exempt from construction permit requirements; addition, alteration, or removal of emission limitations; any changes to monitoring, recordkeeping, or reporting requirements; and any changes or additions to special permit conditions. The following items should be addressed as part of the operating permit renewal request:

a. The facility name; and the name, mailing address, and telephone number of the owner or operator for the facility;

b. The location of the facility including its street address and the name, mailing address, and telephone number of the facility's contact person;

c. The facility's Federal Employer Identification Number or Federal Tax ID Number;

d. Any change to the SIC Code or NAICS Codes of the products or product lines;

e. Any construction permits to be incorporated into the operating permit, either whole or in part, any listed information descriptions that have been removed or decommissioned, and any changes to exempted sources listed in the current operating permit;

f. Any change to the facility's planned operating schedules or description of the facility's current and/or proposed processes, including the physical and chemical properties and feed rate of the materials used and produced (in lb/hr) from which the facility determined actual and potential emissions;

g. Any changes to current process flow diagram or production process layout shall be addressed, showing the flow of materials and intermediate and final products. Updated process flow diagram or production process layout must identify major equipment, machines, and process steps or product lines within the production process; all product streams; all exhaust streams (emission points) including fugitive within the production process; all waste streams; and all control devices including inherent process control devices used within the production process;

h. A description, including the CAS number (if applicable), of all emissions from each source. Mass emission data and emission calculations, including the potential uncontrolled and controlled mass emission rate of each criteria pollutant and other air contaminants such as VOCs, TAPs, and HAPs emitted from each source. Emission calculations must be based on proper documentation that supports the basis of the emission rates such as stack test data, AP-42 emission factors, material balance, and/or engineering estimates. All assumptions used in the emission calculations must be provided. Fugitive emissions (for example, emissions from filling operations, pumps, valves, flanges, etc.) must be included in the emission calculations. A summary of facility-wide potential uncontrolled and controlled emissions with a regulatory applicability determination must be provided. If existing data supplied to the Department remains correct, identify documents referenced to comply with this requirement;

i. A description of stack, vent, or fugitive emission parameters associated with each non-exempt emission source. For each emission point/source, this information should include, as appropriate, Universal Transverse Mercator or latitude and longitude coordinates of the emission location, the

minimum height above ground, maximum internal dimensions of the emission point/vent, discharge orientation, emission exit velocity, emission exit temperature, dimensions describing the volume or area of fugitive emissions, existence of any rain protection device or other impediment to vertical dispersion, etc. If existing data supplied to the Department remains correct, identify the document(s) submitted to comply with this requirement; and

j. Other information as may be necessary for proper evaluation of the operating permit request.

I. Registration Permits

1. Development of Registration Permits

a. The Department may develop registration permits applicable to similar sources. Any registration permit developed shall specify compliance with all requirements applicable to the construction and operation of that specific category of stationary sources and shall identify criteria by which sources may qualify for the registration permit.

b. Registration permits will be developed only for specific stationary source groups with uncontrolled potential to emit less than the threshold for major source groups, in accordance with Regulation 61-62.70, Title V Operating Permit Program; Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration; Regulation 61-62.5, Standard No. 7.1, Nonattainment New Source Review; and where equipment similarities and simplicity remove the need for in depth site-specific review.

2. Application for Coverage Under a Registration Permit

a. A source that qualifies may elect to apply to the Department for coverage under a registration permit in lieu of a construction and operating permit as provided in Section II.A. and F above. The Department shall grant a registration permit to sources certifying qualification for and agreeing to the conditions and terms of the registration permit applicable to similar sources.

b. The source shall be subject to enforcement action for operation without a valid permit if the source is later determined not to qualify for the conditions and terms of a registration permit. The Department reserves the right to require a construction and/or operating permit; the requirement for a permit(s) will be made by the Department on a case-by-case basis. This determination will take into consideration, but may not be limited to, the nature and amount of the pollutants, location, and proximity to residences and commercial establishments.

c. The Department may grant a source's request for authorization to operate under a registration permit, but such a grant shall be a final permit action for purposes of judicial review.

3. Registration Permit Conditions

a. Registration permits shall contain any applicable permit conditions listed in Section II.J below as the Department finds appropriate.

b. Registration permits shall contain any applicable special permit conditions required to verify a source's compliance with any emissions limitations and operational requirements.

4. Any registration permit may be reopened by the Department for cause or to include any new standard or regulation which becomes applicable to a source during the life of the permit.

J. Permit Conditions

1. Standard Permit Conditions

All construction and operating permits shall contain the following standard permit conditions.

a. No applicable law, regulation, or standard will be contravened.

b. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction or operating permit may be grounds for permit revocation.

c. For sources not required to have continuous emission monitors, any malfunction of air pollution control equipment or system, process upset, or other equipment failure which results in discharges of air contaminants lasting for one (1) hour or more and which are greater than those discharges described for normal operation in the permit application, shall be reported to the Department within twenty-four (24) hours after the beginning of the occurrence and a written report shall be submitted to the Department within thirty (30) days. The written report shall include, at a minimum, the following:

i. The identity of the stack and/or emission point where the excess emissions occurred;

ii. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions;

iii. The time and duration of the excess emissions;

iv. The identity of the equipment causing the excess emissions;

v. The nature and cause of such excess emissions;

vi. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction;

vii. The steps taken to limit the excess emissions; and

viii. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

d. Sources required to have continuous emission monitors shall submit reports as specified in applicable parts of the permit, law, regulations, or standards.

e. Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this regulation or with the terms of any approval to construct, or who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to enforcement action.

f. Approval to construct shall become invalid if construction is not commenced within eighteen (18) months after receipt of such approval, if construction is discontinued for a period of eighteen (18) months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction

project; each phase must commence construction within eighteen (18) months of the projected and approved commencement date.

g. A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under a permit shall be maintained on site for a period of at least five (5) years from the date the record was generated.

2. Special Permit Conditions

As the Department finds appropriate, permits shall include special permit conditions such as, but not limited to, production limits, operational limits, source performance testing, operation and maintenance requirements, notification requirements, recordkeeping requirements, reporting requirements, and other monitoring as required.

a. When special permit conditions contain production or operational limits, the permit shall have monitoring and/or recordkeeping requirements to verify a source's compliance with the limitations.

b. When special permit conditions require an add-on air pollution control device to be operated at a specified destruction and removal efficiency level, the permit shall have monitoring and recordkeeping requirements to determine the add-on air pollution control device's performance on a short term basis.

c. The time period over which a permit limitation on production or operation extends will be as short as possible. For the purpose of determining compliance, permit limitations will, in general, not exceed one (1) month and shall not exceed an annual limit with a rolling monthly average or sum.

d. An owner or operator of stationary sources that desires or is required to conduct performance tests to verify emissions limitations shall ensure that source tests are conducted in accordance with the provisions of Regulation 61-62.1, Section IV, Source Tests.

e. An hourly emission limit shall be sufficient only if the permit condition(s) require the installation, calibration, maintenance, and operation of a CEMS or any other monitoring approved by the Department. All monitoring data shall be defined and recorded for showing compliance with the emission limit(s).

f. The limitations and requirements listed in the permit conditions shall be permanent, quantifiable, or otherwise enforceable as a practical matter.

K. Exceptions

1. Upon request, the Department may alter operating permits, compliance schedules, or other restrictions on operation of a source provided that resulting ambient air concentration levels will not exceed any national or state ambient air quality standard. Factors to be considered by the Department may include, but are not limited to, technology, economics, national energy policy, and existing air quality. The request by the source must also show the following:

a. Good faith efforts have been made to comply with the state requirements;

b. The source is unable to comply with the state requirements because the necessary technology or other alternative methods of control are not reasonably available or have not been available for a sufficient period of time;

c. Any available operating procedures or control measures reducing the impact of the source on ambient air concentrations have been implemented; and

d. The request is submitted in a timely manner.

2. The provisions of this paragraph shall not apply to mass emission limits which are imposed upon any source by the following requirements:

a. Federal New Source Performance Standards (NSPS);

b. National Emission Standards for Hazardous Air Pollutants (NESHAP);

c. Federal or State Prevention of Significant Deterioration (PSD) Regulations; or

d. Nonattainment requirements.

3. Where a permanent increase in the visible emission limitation for a source is requested, the source must demonstrate that it will remain in compliance with the applicable particulate emission standard.

4. Any alternative compliance schedule shall provide for compliance with the applicable regulations as expeditiously as practicable based on a plan submitted with the request for the alternative compliance schedule.

5. Any request under this section will be subjected to public notice and opportunity for a public hearing. Upon approval by the Board, the recommendations of this Department shall be sent to the Administrator, or his designated representative, for approval or disapproval.

6. Where alternative compliance schedule provisions are contained elsewhere in the air pollution control regulations, those provisions shall supersede the requirements in this section.

L. Emergency Provisions

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, in which a situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2. An emergency may be documented through properly signed, contemporaneous operating logs and other relevant evidence that verify:

a. An emergency occurred and the owner or operator can identify the cause(s) of the emergency;

b. The permitted source was, at the time the emergency occurred, being properly operated;

c. During the period of the emergency, the owner or operator took all reasonable steps to minimize

levels of emissions that exceeded the emission standards or other requirements in the permit; and

d. The owner or operator gave a verbal notification of the emergency to the Department within twenty-four (24) hours of the time when emission limitations were exceeded, followed by a written report within thirty (30) days. The written report shall include, at a minimum, the information required by Section II.J.1.c.i through J.1.c.viii above. The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

3. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

M. Transfer of Ownership/Operation

Within thirty (30) days of the transfer of ownership/operation of a facility, the current permit holder and prospective new owner/operator shall submit to the Department a written request for transfer of the source operating or construction permit(s). The written request for transfer of the source operating or construction permit(s) shall include any changes pertaining to the facility name; the name, mailing address, and telephone number of the owner or operator for the facility; and any proposed changes to the permitted activities of the source. Transfer of the operating or construction permit(s) will be effective upon written approval by the Department.

N. Public Participation Procedures

1. When determined to be appropriate by the Department (or specified by regulation), notice of permitting activity shall be provided to the public and other entities for their review and comment. Public notice shall be given by publication in a newspaper of general circulation in the area where the source is located, or by posting on the Department's website, or by publication in the South Carolina State Register, and to persons on a mailing list developed by the Department, including those who request in writing to be on the list. The Department may use other means of public notice.

2. The notice shall include the following:

a. The name and physical address of the facility;

b. The name and address of the Department;

c. Applicable activities involved in the permit action;
d. Applicable emission change involved in any permit modification;

e. The name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all other materials available to the Department that are relevant to the permit decision, except for information entitled to confidential treatment (the contents of any proposed or draft permit shall not be treated as confidential information);

f. A brief description of the comment procedures; and

g. The time and place of any public hearing that may be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled).

3. The Department shall provide at least thirty (30) days for public and EPA comment and shall give

notice of any public hearing at least thirty (30) days in advance of the hearing.

a. The Department shall keep a record of the commenters and the comments made during the public comment period.

b. The Department shall consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application.

4. A newly constructed or modified source issued a federally enforceable final construction permit will not require an additional public comment period and/or hearing to obtain an operating permit, unless the source proposes a change in the original construction and/or operational plan, prior to commencing construction, which the Department determines would require an additional public comment period and/or hearing.

5. Any proposed new or modified stationary source required to undergo a public comment period shall not commence any construction until all public participation procedures of this section are completed, and the source has received an effective construction permit from the Department.

6. Maintenance activities, repairs, and replacements which the Department determines to be routine for that source category shall not, by themselves, be required to undergo the public participation procedures of Section II.N.

O. Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following:

1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

4. As authorized by the Clean Air Act and/or the South Carolina Pollution Control Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

SECTION III – EMISSIONS INVENTORY AND EMISSIONS STATEMENTS

A. General

1. An emissions inventory is a study or compilation of pollutant emissions. The purposes of emissions inventories are to locate air pollution sources, to define the type and size of sources, to define the type and amount of emissions from each source, to determine pollutant frequency and duration, to determine the relative contributions to air pollution from classes of sources and of individual sources, to provide a basis for air permit fees, and to determine the adequacy of regulations and standards. The requirements of this section notwithstanding, an emissions inventory may be required from any source at

any time.

2. An emissions statement is a less detailed statement which focuses on emissions estimates for pollutants associated with a nonattainment designation.

B. Emissions Inventory Reporting Requirements

1. Beginning with the effective date of this regulation, sources must submit an emissions inventory for the previous calendar year by March 31 at a frequency as outlined below:

a. Type A Sources are Title V Sources with annual emissions greater than or equal to any of the emission thresholds listed for Type A Sources in Table 1 below. Type A Sources must submit an emissions inventory every year.

Table 1 - Minimum Point Source Reporting Thresholds by Pollutant (tons per year)		
Pollutants	**Type A Sources: Annual Cycle**	**Potential[1] or Actual[2]**
SO_X	≥2500	Potential
VOC	≥250	Potential
NO_X	≥2500	Potential
CO	≥2500	Potential
Pb	≥0.50[2]	Actual
PM_{10}	≥250	Potential
$PM_{2.5}$	≥250	Potential
NH_3	≥250	Potential

[1] Tons per year (tpy) potential to emit means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, will be treated as part of its design if the limitation is enforceable by the Administrator and included in the source's permit prior to the end of the reporting year.

[2] The EPA considers that the ambient monitoring rule threshold is 0.5 tons of actual emissions; therefore, this criterion is based on actual emissions rather than the potential-to-emit approach taken for other criteria pollutant and precursor thresholds.

b. All other Title V Sources with annual emissions less than the emission thresholds listed for Type A Sources in Table 1 above must submit emissions inventories every three (3) years beginning with calendar year 2014 data.

c. Nonattainment area (NAA) Sources are sources located in a NAA with annual emissions during

any year of the three (3) year cycle greater than or equal to any of the emission thresholds listed for NAA Sources in Table 2 below. These sources that are not also Type A Sources must submit emissions inventories every three (3) years beginning with calendar year 2014 data.

Table 2 - Minimum Point Source Reporting Thresholds by Pollutant (tons per year)		
Pollutant	**NAA[3] Sources: Three-year Cycle**	**Potential[1] or Actual[2]**
SO_X	≥100	Potential
VOC	≥100 (moderate O_3 NAA)	Potential
	≥50 (serious O_3 NAA)	
	≥25 (severe O_3 NAA)	
	≥10 (extreme O_3 NAA)	
NO_X	≥100 (all O_3 NAA)	Potential
CO	≥100 (all O_3 NAA)	Potential
	≥100 (all CO NAA)	
Pb	≥0.50	Actual
PM_{10}	≥100 (moderate PM_{10} NAA)	Potential
	≥70 (serious PM_{10} NAA)	
$PM_{2.5}$	≥100	Potential
NH_3	≥100	Potential

[1] Tons per year (tpy) potential to emit means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, will be treated as part of its design if the limitation is enforceable by the Administrator and included in the source's permit prior to the end of the reporting year.

[2] The EPA considers that the ambient monitoring rule threshold is 0.5 tons of actual emissions; therefore, this criterion is based on actual emissions rather than the potential-to-emit approach taken for other criteria pollutant and precursor thresholds.

[3] Special point source reporting thresholds apply for certain pollutants by type of NAA. The pollutants by nonattainment area are:
Ozone: VOC, NO_X, and CO;
Carbon Monoxide: CO; and
Particulate matter less than 10 microns: PM_{10}.

2. Other Requirements

a. Unless otherwise indicated, all emissions inventories must be submitted to the Department by March 31 following the year of inventory. All applicable information must be recorded in the current format for reporting emissions data provided by the Department.

b. All newly permitted and constructed Title V Sources which have obtained or are in the process of obtaining a Title V permit and all newly permitted and constructed NAA Sources must complete and

submit to the Department an initial emissions inventory for the source's first partial calendar year of operation and an emissions inventory for the source's first full calendar year of operation.

i. The partial year emissions inventory must be submitted to the Department no later than March 31 of the year following the source's partial year of operation and must include an emissions inventory from the source's operation start date through December 31 of the same year.

ii. The first full calendar year emissions inventory must be submitted to the Department by March 31 of the year following the source's first calendar year of operation.

iii. Sources must submit future emissions inventories on the schedule as described in paragraph B.1.a, paragraph B.1.b, and paragraph B.1.c of this section.

c. Any existing sources that are determined by the Department to be subject to Regulation 61-62.70, Title V Operating Permit Program, and/or NAA Sources must complete and submit to the Department an emissions inventory for the previous calendar year within ninety (90) days. These sources must then submit future emissions inventories on the schedule as described in paragraph B.1.a, paragraph B.1.b, and paragraph B.1.c of this section.

d. Submittal of emissions inventories outside of the schedules in this section will be accepted and reviewed only if a modification has occurred that required issuance of an air quality permit since the last emissions inventory submittal by the source. This modification must alter the quantity or character of the source's emissions. These sources may submit a new emissions inventory following the first full calendar year of operation after the modification. These sources must then submit future emissions inventories on the schedule described in paragraph B.1.a, paragraph B.1.b, and paragraph B.1.c of this section.

e. Information required in an emissions inventory submittal to the Department must include the following:

i. Information on fuel burning equipment;
ii. Types and quantities of fuel used;
iii. Fuel analysis;
iv. Exhaust parameters;
v. Control equipment information;
vi. Raw process materials and quantities used;
vii. Design, normal, and actual process rates;
viii. Hours of operation;
ix. Significant emission generating points or processes as discussed in the current format for reporting emissions data provided by the Department;
x. Any desired information listed in 40 CFR 51 Subpart A (December 17, 2008) that is requested by the Department;
xi. Emissions data from all regulated pollutants; and
xii. Any additional information reasonably related to determining if emissions from an air source are causing standards of air quality to be exceeded.

f. A source may submit a written request to the Department for approval of an alternate method for estimating emissions outside of those methods prescribed by the Department. Such requests will be reviewed by the Department's emissions inventory staff on a case-by-case basis to determine if the alternate method better characterizes actual emissions for the reporting period than the Department's prescribed methods.

g. Emission estimates from insignificant activities listed on a source's permit are required only in

the initial emissions inventory submitted by the source. If emissions from these insignificant activities have not been included in a past emissions inventory submitted to the Department, the source must include these emissions in their next required emissions inventory submittal.

h. Copies of all records and reports relating to emissions inventories as required in this section must be retained by the owner/operator at the source for a minimum of five (5) years.

C. Emissions Statement Requirements

1. Sources in areas designated nonattainment for an ozone National Ambient Air Quality Standard (NAAQS) must submit to the Department by March 31 for the previous calendar year an emissions statement which includes emissions estimates for both VOCs and nitrogen oxides (NO_X) beginning with the effective date of this regulation.

2. The statement must contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement.

3. All applicable information must be recorded in the current format for reporting emissions data provided by the Department.

4. Copies of all records and reports relating to emissions statements as required in this section must be retained by the owner or operator at the source for a minimum of five (5) years.

SECTION IV – SOURCE TESTS

A. Applicability

1. This section shall apply to the owner, operator, or representative of any source which conducts:

a. A source test required under an applicable standard or permit condition; or pursuant to a judicial or administrative order, consent agreement, or any other such binding requirement entered into after the effective date of this standard; or

b. Any other source test from which data will be submitted to the Department for any purpose including but not limited to: determination of applicability of regulatory requirements, development of emission factors, establishment of parameters for compliance assurance monitoring, continuous emission monitor performance specification testing, and Relative Accuracy Test Audits (RATA).

2. The Department may, on a case-by-case basis, exempt from the requirements of this section source tests which are performed for development of emission factors or for determination of applicability of regulations.

B. Submission and Approval of a Site-Specific Test Plan

1. Prior to conducting a source test subject to this section, the owner, operator, or representative shall ensure that:

a. A written site-specific test plan, including all of the information required in Section IV.C below, has been developed and submitted to the Department. If the Department has previously approved a site-specific test plan, the owner, operator, or representative may submit a letter which references the approved plan and which includes a thorough description of amendments to the plan; and

b. Written Department approval of the site-specific test plan or amended test plan, methods, and procedures has been received.

2. All test methods included in the site-specific test plan must be either EPA Reference Methods described in 40 CFR 51, Appendix M; or 40 CFR 60, Appendix A; or 40 CFR 61, Appendix B; or 40 CFR 63, Appendix A. If an applicable air regulation or permit provides for a choice of test methods, the selected method must be approved by the Department. If an applicable air regulation or permit does not specify use of an EPA standard reference method, the alternative test method to be used must be approved by the Department.

3. a. The owner, operator, or representative of a source proposing to use alternative source test methods shall ensure that the alternative source test method is either validated according to EPA Reference Method 301 (40 CFR 63, Appendix A, December 29, 1992) and any subsequent amendments or editions, or approved by the Department.

b. The owner, operator, or representative shall ensure that requests for approval of alternative source test methods are submitted to the Department along with the site-specific test plan, and that the submission contains all of the information required by Section IV.C below.

4. The Department shall determine whether any source test method proposed in the site-specific test plan is appropriate for use.

5. a. The owner, operator, or representative shall submit site-specific test plans or a letter which amends a previously approved test plan at least forty-five (45) days prior to the proposed test date. Sources conducting tests for substances listed in Regulation 61-62.5, Standard No. 8, shall submit site-specific test plans or a letter which amends a previously approved test plan at least sixty (60) days prior to the proposed test date.

b. If the only amendments to a previously approved test plan are to facility information included in Section IV.C.1.a and C.1.b below, the requirement in Section IV.B.5.a above will not apply. The owner, operator, or representative however, shall submit the amendments at least two (2) weeks prior to the proposed test date.

6. Within thirty (30) days of site-specific test plan receipt, the Department will notify the owner, operator, or representative of site-specific test plan approval or denial or will request additional information.

7. The owner, operator, or representative shall submit any additional information requested by the Department necessary to facilitate the review of the site-specific test plan.

8. Approval of a site-specific test plan for which an owner, operator, or representative fails to submit any additional requested information will be denied.

9. Neither the submission of a site-specific test plan, nor the Department's approval or disapproval of a plan, nor the Department's failure to approve or disapprove a plan in a timely manner shall relieve an owner, operator, or representative of legal responsibility to comply with any applicable provisions of this section or with any other applicable federal, state, or local requirement or prevent the Department from enforcing this section.

A site-specific test plan shall include, at a minimum, the following (Section IV.C.1 through C.8):

1. General Information:

a. Facility name, address, telephone number, and name of facility contact;

b. Facility permit number and source identification number;

c. Name, address, and telephone number of the company contracted to perform the source test; and

d. Name, address, and telephone number of the laboratory contracted to perform the analytical analysis of the source test samples.

2. Test Objectives:

a. Description and overall purpose of the tests (for example, to demonstrate compliance, to establish emission factors, etc.); and

b. Citation of any applicable state or federal regulation or permit condition requiring the tests.

3. Process Descriptions:

a. Description of the process including a description of each phase of batch or cyclic processes and the time required to complete each phase;

b. Process design rates and normal operating rates;

c. Proposed operating rate and conditions for the source test;

d. Methods including proposed calculations, equations, and other related information that will be used to demonstrate and verify the operating rate during the source test;

e. Description of any air pollution control equipment;

f. Description of any stack gas or opacity monitoring systems;

g. Description of all air pollution control monitors (for example, pressure gauges, flow indicators, cleaning cycle timers, electrostatic precipitator voltage meters, etc.) when applicable; and

h. A list of process and air pollution control operating parameters that will be recorded during the tests, the responsible party who will record these readings, and the frequency at which readings will be recorded.

4. Safety Considerations:

a. Identification of any risks associated with sampling location and accessibility, toxic releases, electrical hazards, or any other unsafe conditions; and a plan of action to correct or abate these hazards; and

b. List of all necessary or required safety equipment including respirators, safety glasses, hard

hats, safety shoes, hearing protection, and other protective equipment.

5. Sampling and Analytical Procedures:

a. Description of sampling methods to be used;

b. Description of analytical methods to be used;

c. Number of tests to be conducted;

d. Number of runs comprising a test;

e. Duration of each test run;

f. Description of minimum sampling volumes for each test run;

g. Location where samples will be recovered;

h. Explanation of how blank and recovery check results and analytical non-detects will be used in final emission calculations;

i. Maximum amount of time a sample will be held after collection prior to analysis; and

j. Method of storing and transporting samples.

6. Sampling Locations and Documentation:

a. Schematics of sampling sites (include stack dimensions and distances upstream and downstream from disturbances);

b. A description of all emission points, including fugitive emissions, associated with the process to be tested, and when applicable, the method that will be used to measure or include these emissions during the source test; and

c. Procedure for verifying absence of cyclonic or non-parallel stack gas flow.

7. Internal Quality Assurance/Quality Control (QA/QC) Measures - for each proposed test method when applicable:

a. Citation of the QA/QC procedures specified in the EPA Reference Methods and the EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III;

b. Chain-of-custody procedures and copies of chain-of-custody forms;

c. Procedure for conditioning particulate matter filters (before and after source testing);

d. Procedure for conducting leak checks on vacuum lines, pitot tubes, flexible bags, orsats, etc.;

e. Equipment calibration frequencies, ranges, and acceptable limits;

f. Minimum detection limits of analytical instrumentation;

g. Names, addresses, and responsible persons of all sub-contracting laboratories and a description of analytical methods to be used, chain-of-custody procedures, and QA/QC measures;

h. QA/QC measures associated with the collection and analysis of process or raw material samples and the frequency at which these samples will be collected;

i. Methods for interference and matrix effects checks, and number of replicate analyses;

j. Methods and concentrations for internal standards (standards additions prior to extraction);

k. Methods and concentrations for surrogate standards (standards additions to collection media prior to sampling);

l. Methods for recovery checks, field blanks, lab blanks, reagent blanks, proof rinse blanks, and analytical blanks;

m. Proposed range of recoveries for data acceptability and method of data interpretation if sample recovery is not within the proposed range; and

n. Procedure for obtaining, analyzing, and reporting source test method performance audit samples and results.

8. Final Test Report Content:

a. Final report outline;

b. Example calculations when using alternative test methods or for calculation of process operating rates; and

c. Proposed report submission date if more than thirty (30) days after the source test will be needed to complete the report.

D. Notification and Conduct of Source Tests

1. Prior to conducting a source test subject to this section, the owner, operator, or representative shall ensure that a complete written notification is submitted to the Department at least two (2) weeks prior to the test date. Submission of a site-specific test plan or amendments to a previously approved test plan does not constitute notification. Requirements for a complete notification include the following:

a. Facility name, permit number, mailing address, physical address, and contact name and phone number;

b. Source(s) being tested, source identification number(s), and pollutant(s) being tested;

c. Proposed test date and start time for each source being tested; and

d. Approved test plan being used to conduct the test identified by Department approval date.

2. In the event the owner, operator, or representative is unable to conduct the source test on the date specified in the notification, the owner, operator, or representative shall notify the Department as soon as practical by telephone and follow up in writing within thirty (30) days. Telephone notification shall

include a description of the circumstance(s) causing the cancellation of the test, and a projected retest date. The written follow-up report shall include a description of the condition(s) which prevented the source test from being conducted, and when applicable, what corrective action was performed, or what equipment repairs were required.

3. Rescheduling of canceled source tests must meet the two-week notice requirement. However, shorter notification periods may be allowed subject to Department approval.

4. All tests shall be conducted by or under the direction of a person qualified by training and/or experience in the field of air pollution testing or, where required by federal regulation, meeting the minimum competency requirements for air emissions testing as specified in ASTM D7036-04, Standard Practice for Competence of Air Emission Testing Bodies.

5. Unless approved otherwise by the Department, the owner, operator, or representative shall ensure that source tests are conducted while the source is operating at the maximum expected production rate or other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Examples of the operating parameters that may affect emission rates are: type and composition of raw materials and fuels, isolation of control equipment modules, product types and dimensions, thermal oxidizer combustion temperature, atypical control equipment settings, etc. Some sources may have to spike fuels or raw materials to avoid being permitted at a more restrictive feed or process rate. Any source test performed at a production rate less than the rated capacity may result in permit limits on emission rates, including limits on production if necessary.

6. When conducting a source test subject to this section, the owner, operator, or representative of a source shall provide the following:

a. Department access to the facility to observe source tests;

b. Sampling ports adequate for test methods;

c. Safe sampling site(s);

d. Safe access to sampling site(s);

e. Utilities for sampling and testing equipment; and

f. Equipment and supplies necessary for safe testing of a source.

E. Source Test Method Performance Audit Program

1. The Department may request that samples collected during any source tests be split with the Department for analysis by an independent or Department laboratory. Any request for split samples will be made in advance of the source test.

2. Performance testing shall include a test method performance audit (PA) during the performance test if a PA sample is commercially available.

a. PAs consist of blind audit samples supplied by an accredited audit sample provider (AASP) and analyzed during the performance test in order to provide a measure of test data bias.

b. An “accredited audit sample provider (AASP)” is an organization that has been accredited to

prepare audit samples by an independent, third party accrediting body.

3. The source owner, operator, or representative of the tested facility shall obtain an audit sample, if commercially available, from an AASP for each test method used for regulatory compliance purposes.

a. No audit samples are required for the following test methods: Methods 3A and 3C of Appendix A-2 of 40 CFR 60; Methods 6C, 7E, 9, and 10 of Appendix A-4 of 40 CFR 60; Method 18 of Appendix A-6 of 40 CFR 60; Methods 20, 22, and 25A of Appendix A-7 of 40 CFR 60; and Methods 303, 318, 320, and 321 of Appendix A of 40 CFR Part 63.

b. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each method used during a compliance test.

c. Upon request, the Department may waive the requirement to include an audit sample if the Department determines that an audit sample is not necessary. A waiver of the performance audit requirements to conduct a PA for a particular source does not constitute a waiver of performance audit requirements for future source tests.

d. "Commercially available" means that two or more independent AASPs have blind audit samples available for purchase. If the source owner, operator, or representative cannot find an audit sample for a specific method, the owner, operator, or representative shall consult the EPA Web site at the following URL, http://www.epa.gov/ttn/emc, to confirm whether there is an AASP that can supply an audit sample for that method.

e. If the EPA Web site does not list an available audit sample at least 60 days prior to the beginning of the compliance test, the source owner, operator, or representative shall not be required to include an audit sample as part of the quality assurance program for the compliance test.

f. When ordering an audit sample, the source, operator, or representative shall give the AASP an estimate for the concentration of each pollutant that is emitted by the source or the estimated concentration of each pollutant based on the permitted level and the name, address, and phone number of the Department.

g. The source owner, operator, or representative shall report the results for the audit sample along with a summary of the emission test results for the audited pollutant to the Department and shall report the results of the audit sample to the AASP. The source owner, operator, or representative shall make both reports at the same time and in the same manner or shall report to the Department first and then report to the AASP.

h. If the method being audited is a method that allows the samples to be analyzed in the field and the tester plans to analyze the samples in the field, the tester may analyze the audit samples prior to collecting the emission samples provided a representative of the Department is present at the testing site. The source owner, operator, or representative may request in the test protocol a waiver to the requirement that a representative of the Department must be present at the testing site during the field analysis of an audit sample.

i. The final test report shall document any attempt to obtain an audit sample and, if an audit sample was ordered and utilized, the pass/fail results as applicable.

4. The Department shall have discretion to require any subsequent remedial actions of the owner, operator, or representative based on the split samples and/or performance audit results.

F. Final Source Test Report

1. The owner, operator, or representative of a source subject to this section shall submit a written report of the final source test results to the Department by the close of business on the 30th day following the completion of the test, unless an alternative date has been requested in and approved with the site-specific test plan prior to testing or is otherwise specified in a relevant federal or state standard.

2. The final test report for each site-specific test plan shall contain, at a minimum, the following supporting information when applicable:

a. Summary of the results;

b. Emission calculations and emission rates in units of the applicable standard, permit limit, etc.;

c. Allowable emission rates in units of the applicable standard, permit limit, etc.;

d. Source compliance status;

e. Process operating rates;

f. Methods including actual calculations, equations, and other related information that were used to demonstrate and verify the operating rate during the source test;

g. Chain of custody records;

h. Certification of all reference standards used;

i. Signature of a responsible facility representative who can verify process operating rates and parameters;

j. Legible copies of all raw laboratory data (for example, filter tare and final weights, titrations, chromatograms, spectrograms, analyzer measurements, etc.);

k. Legible copies of all raw field data (for example, strip charts, field data forms, field calibration forms, etc.);

l. Legible copies of applicable stack gas or opacity monitoring system readings identified in the approved site-specific test plan;

m. Legible copies of all applicable process and air pollution control operating parameter readings identified in the approved site-specific test plan;

n. Results of all calibrations and QA/QC measures and checks identified in the approved site-specific test plan;

o. Results of performance audits pursuant to Section IV.E above or documentation that no audit sample was commercially available 60 days prior to the beginning of the compliance test;

p. Description of any deviations from the proposed process operations as approved in the site-specific test plan during testing;

q. Description of any deviations from approved sampling methods/procedures;

r. Description of any deviations from approved analytical procedures;

s. Description of any problems encountered during sampling and analysis, and explanation of how each was resolved; and

t. Legible copies of any applicable or required certifications (for example, Visible Emission Observer, Qualified Source Testing Individual (QSTI), etc.).

G. Noncompliant Results

Within fifteen (15) days of submission of a test report indicating noncompliance, the owner, operator, or representative shall submit to the Department a written plan which includes at a minimum:

1. Interim actions being taken to minimize emissions pending demonstration of compliance;

2. Corrective actions that have been taken or that are proposed to return the source to compliance;

3. Method that will be used to demonstrate the source has returned to compliance (for example, retest and proposed date); and

4. Any changes necessary to update the site-specific test plan prior to a retest.

H. Analytical Observation

Upon request by the Department, the owner, operator, representative, or the source test consultant shall ensure that Department representatives are provided access to the analytical laboratory for observation of instrument calibrations and analysis of field and audit samples.

I. Site Inspection

Upon request by the Department and prior to approval of the site-specific test plan, the owner, operator, or representative shall ensure Department representatives are provided access to the site for inspection of the source(s) to be tested.

J. Modifications

Modifications to the approved site-specific test plan must have prior Department approval. Approval shall be considered on a case-by-case basis. Failure to obtain prior Department approval may cause final test results to be unacceptable.

SECTION V – CREDIBLE EVIDENCE

A. The Department promulgated Regulation 61-62, Air Pollution Control Regulations and Standards, and developed the South Carolina Air Quality Implementation Plan to provide enforceable emission limitations; to establish an adequate enforcement program; to require owners or operators of stationary sources to monitor emissions, submit periodic reports of such emissions, and maintain records as specified by various regulations and permits; and to evaluate reports and records for consistency with the applicable emission limitation or standard on a continuing basis over time. The monitoring data collected and records of operations would serve as the basis for a source to certify compliance, and could be used by the Department

as direct evidence of an enforceable violation of the underlying emission limitation or standard.

B. The purpose of this section is:

1. To clarify the statutory authority of Regulation 61-62, Air Pollution Control Regulations and Standards, and the South Carolina Air Quality Implementation Plan, whereby non-reference test data and various kinds of information already available and utilized for other purposes may be used to demonstrate compliance or noncompliance with emission standards;

2. To eliminate any potential ambiguity regarding language that has been interpreted to provide for exclusive reliance on reference test methods as the means of certifying compliance with various emission limits; and

3. To curtail language that limits the types of testing or monitoring data that may be used for determining compliance and for establishing violations.

C. The following are applicable in the determination of noncompliance by the Department or for compliance certification by the owners or operators of stationary sources:

1. Enforcement - Consistent with South Carolina's Environmental Audit Privilege and Voluntary Disclosure Act, codified as S.C. Code Ann. Sections 48-57-10 et seq., and notwithstanding any other provision in the South Carolina Air Quality Implementation Plan, any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, can be used to establish whether or not a person has violated or is in violation of any standard in the plan; and

2. Compliance Certifications - Consistent with South Carolina's Environmental Audit Privilege and Voluntary Disclosure Act, codified as S.C. Code Ann. Sections 48-57-10 et seq., and notwithstanding any other provision in the South Carolina Air Quality Implementation Plan, the owner or operator may use any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed for the purpose of submitting compliance certifications.

R. 61-62.1 History - *South Carolina State Register*:

Vol. 7, Issue No. 2, (Doc. No. ?), February 25, 1983;
Vol. 7, Issue No. 6, (Doc. No. 314), June 24, 1983;
Vol. 9, Issue No. 5, (Doc. No. 457), May 24, 1985;
Vol. 10, Issue No. 5, (Doc. No. ?), May 23, 1986;
Vol. 12, Issue No. 2, (Doc. No. 769), February 26, 1988;
Vol. 12, Issue No. 4, (Doc. No. 970), April 22, 1988;
Vol. 13, Issue No. 2, (Doc. No. 868), February 24, 1989;
Vol. 13, Issue No. 3, (Doc. No. 1053), March 24, 1989;
Vol. 14, Issue No. 6, (Doc. No. 1067), June 22, 1990;
Vol. 14, Issue No. 9, (Doc. No. 1267), August 24, 1990;
Vol. 14, Issue No. 9, (Doc. No. 1310), August 24, 1990;
Vol. 16, Issue No. 6, (Doc. No. 1507), June 26, 1992;
Vol. 19, Issue No. 6, (Doc. No. 1798), June 23, 1995;
Vol. 20, Issue No. 1, (Doc. No. 1913), January 26, 1996;
Vol. 22, Issue No. 6, (Doc. No. 2244), June 26, 1998;
Vol. 22, Issue No. 8, (Doc. No. 2328), August 28, 1998;
Vol. 23, Issue No. 6, (Doc. No. 2352), June 25, 1999;

Vol. 24, Issue No. 5, (Doc. No. 2444), May 26, 2000;
Vol. 25, Issue No. 7, (Doc. No. 2622), July 27, 2001;
Vol. 25, Issue No. 10, (Doc. No. 2648), October 26, 2001;
Vol. 26, Issue No. 8, (Doc. No. 2736), August 23, 2002;
Vol. 27, Issue No. 6, (Doc. No. 2840), June 27, 2003;
Vol. 29, Issue No. 2, (Doc. No. 2840), February 25, 2005;
Vol. 29, Issue No. 6, (Doc. No. 2943), June 24, 2005;
Vol. 29, Issue No. 8, (Doc. No. 2980), August 26, 2005;
Vol. 31, Issue No. 5, (Doc. No. 3069), May 25, 2007;
Vol. 32, Issue No. 10, (Doc. No. 3224), October 24, 2008;
Vol. 34, Issue No. 5, (Doc. No. 4085), May 28, 2010;
Vol. 34, Issue No. 11, (Doc. No. 4131), November 26, 2010;
Vol. 35, Issue No. 5, (Doc. No. 4130), May 27, 2011;
Vol. 35, Issue No. 11, (Errata), November 25, 2011;
Vol. 36, Issue No. 1, (Errata), January 27, 2012;
Vol. 36, Issue No. 9, (Errata), September 28, 2012;
Vol. 37, Issue No. 4, (Doc. No. 4330), April 26, 2013;
Vol. 37, Issue No. 12 (Doc. No. 4387), December 27, 2013;
Vol. 38, Issue No. 6, (Doc. No. 4388), June 27, 2014;
Vol. 39, Issue No. 11, (Doc. No. 4577), November 27, 2015;
Vol. 40, Issue No. 6, (Doc. No. 4590), June 24, 2016.
Vol. 40, Issue No. 9, (Doc. No. 4650), September 23, 2016.

SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.5
AIR POLLUTION CONTROL STANDARDS

STANDARD NO. 1
EMISSIONS FROM FUEL BURNING OPERATIONS

SECTION I - VISIBLE EMISSIONS

A. Existing Sources

No one shall discharge to the ambient air from any existing source constructed prior to February 11, 1971, smoke which exceeds opacity of forty (40) percent. The forty (40) percent opacity limit may be exceeded for soot blowing, but may not be exceeded for more than six (6) minutes in a one hour period nor be exceeded for more than a total of twenty-four (24) minutes in a twenty-four (24) hour period. Emissions caused by soot blowing shall not exceed sixty (60) percent.

B. New Sources

No one shall discharge to the ambient air from any source constructed on or after February 11, 1971, smoke which exceeds opacity of twenty (20) percent. The twenty (20) percent opacity limit may be exceeded for soot blowing, but may not be exceeded for more than six (6) minutes in a one hour period nor be exceeded for more than a total of twenty-four (24) minutes in a twenty-four (24) hour period. Emissions caused by soot blowing shall not exceed sixty (60) percent.

C. Special Provisions

Owners and operators shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the owner or operator of fuel burning sources except natural gas and propane fired units, shall maintain a log of the time, magnitude, duration, and any other pertinent information to determine periods of startup and shutdown and make available to the Department upon request.

D. Test Method

The method which is approved by the Department for determining compliance with opacity limitations under this Section is EPA Reference Method 9 (40 Code of Federal Regulations (CFR) 60, Appendix A, as revised July 1, 1986). Alternate methods may be utilized only if approved in advance by the Department and by the Environmental Protection Agency (EPA).

SECTION II - PARTICULATE MATTER EMISSIONS

A. Allowable Discharge

The allowable discharge of particulate matter resulting from fuel burning operations shall be limited to

the values obtained by use of Figure 1 and/or Part B. (For the purpose of determining heat input, total equipment capacity refers to total equipment capacity discharging through each stack. If a boiler has more than one (1) stack the total rated capacity will be the boiler rated capacity discharging to these stacks). Interpolation of Figure 1 for fuel burning operations of 1300 million British thermal units (Btu) per hour (Btu/hr) heat input and larger shall be accomplished by use of the equation:

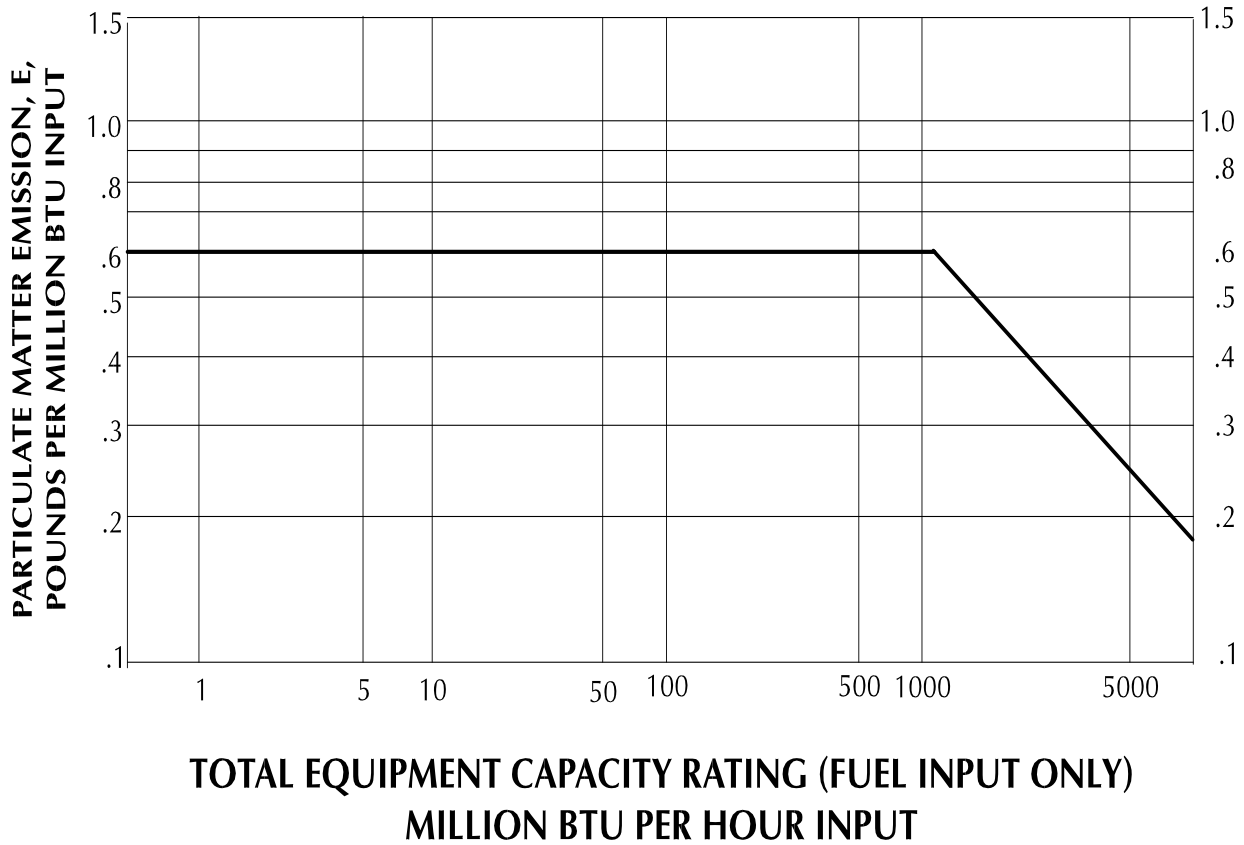
$$E = 57.84\ P^{-0.637}$$

where E = the allowable emission rate in pounds per million Btu heat input,
and P = million Btu/hr heat input

B. Special Provisions

All fuel burning operations of 10 million Btu/hr heat input and smaller constructed prior to February 11, 1971, shall be allowed 0.8 pounds (lbs) per million Btu input.

Figure 1



SECTION III - SULFUR DIOXIDE EMISSIONS

The maximum allowable discharge of sulfur dioxide (SO_2) from fuel burning operations shall be 2.3 lbs

SO_2 per million Btu input.

SECTION IV - OPACITY MONITORING REQUIREMENTS

A. Applicable Sources

1. Fossil Fuel Fired Boilers

The owner or operator of any fossil fuel-fired steam generator of more than 250 million Btu/hr heat input capacity shall install, calibrate, operate, and maintain no later than June 14, 1978, continuous monitoring system(s) for the measurement of opacity which meets the performance specifications of Section IV.D except where:

a. Gaseous fuel is the only fuel burned.

b. Oil or a mixture of gas and oil are the only fuels burned and the steam generator is able to comply with the provisions of Sections I and II of this standard without utilization of particulate matter collection equipment, and where the steam generator has never been found, through any administrative or judicial proceedings, to be in violation of Section I of this standard.

c. The steam generator operates with an annual average capacity factor of thirty (30) percent or less, as reported to the Federal Power Commission for calendar year 1974 or otherwise adequately demonstrated to the Department; and has not subsequently increased this factor to more than thirty (30) percent.

2. Woodwaste Boilers

The owner or operator of any woodwaste boiler, not equipped with a wet scrubber, will be required to install, calibrate, operate, and maintain continuous monitoring system(s) approved by the Department for the measurement of opacity, if it meets one or more of the criteria listed in items A.2.a and A.2.b. If a boiler is fired on more than one fuel, the total capacity will determine the applicability.

a. Any woodwaste boiler of at least 100×10^6 Btu/hr rated heat input.

b. Any woodwaste boiler, regardless of size, that has been operating in noncompliance with any applicable state air pollution control regulations and standards.

B. Continuous Opacity Monitor Reporting Requirements

1. The owner or operator of any fossil fuel-fired steam generator subject to the provisions of Section IV.A shall submit a written Continuous Opacity Monitor report to the Department semi-annually or more often if requested. All semi-annual reports must be postmarked by the 30th day following the end of each semi-annual period. The report shall include, at a minimum, the information in items B.1.a through B.1.c below. A letter shall be sent in lieu of a semi-annual report if no incidences occurred during the reporting period.

a. All integrated six (6) minute opacity measurements for periods during which the applicable provisions of Section I have been exceeded, together with their nature and cause.

b. For periods of monitoring system malfunction:

(i) The date and time identifying each period during which the monitoring system was inoperative, except for zero and span checks.

(ii) The nature of monitoring system repairs or adjustments.

(iii) Proof of opacity monitoring system performance may be required by the Department whenever repairs or adjustments have been made.

c. Boiler system repairs or adjustments made to correct violations of the provisions of Section I.

2. Alternative data reporting procedures may be allowed if the owner or operator shows, to the satisfaction of the Department, that these procedures are at least as accurate as those described.

3. The owner or operator shall maintain a file of all information contained in the semi-annual reports, calibration data for the opacity monitoring system(s), relevant records of adjustments and maintenance performed on such system(s), and all other data generated by the continuous opacity monitoring system(s), for a minimum of two (2) years from the date of submission of such reports or collection of such data. The information contained on file must be made available for review by Department personnel upon request.

C. Exemption from Reporting Requirements

A temporary exemption from the opacity monitoring and reporting requirements of Section IV may be granted during any period of monitoring system(s) malfunction, provided the owner or operator shows, to the satisfaction of the Department, that the malfunction was unavoidable and is being repaired as expeditiously as possible.

D. Equipment Performance Specifications

1. The continuous opacity monitoring system(s) required by Section IV.A.1 (for fossil fuel fired steam generators) shall conform with the performance specifications set forth in 40 CFR 60, Appendix B, Performance Specification 1, as revised July 1, 1986, which is incorporated by reference as a part of this standard except that where the term “Administrator” is used the term “Department” shall be substituted. In addition, the opacity monitoring system(s) shall complete a minimum of one (1) cycle of operation for each successive 10-second period, be installed such that representative measurements of opacity from the affected steam generator are obtained, and have an instrument span of approximately eighty (80) percent opacity.

2. The owner or operator shall record the zero and span drift in accordance with the method prescribed by the manufacturer of such opacity monitoring system(s); subject the system(s) to the manufacturer’s recommended zero and span check at least once daily unless the manufacturer has recommended adjustments at shorter intervals, in which case such recommendations shall be followed; adjust the zero and span whenever the 24-hour zero drift or 24-hour calibration drift limits of 40 CFR 60, Appendix B, Performance Specification 1, as revised July 1, 1986, are exceeded; adjust the opacity monitoring system(s) purchased prior to September 11, 1974, whenever the 24-hour zero drift or 24-hour calibration drift exceeds four (4) percent opacity for those generators constructed prior to February 11, 1971, and two (2) percent opacity for those generators constructed after February 11, 1971.

3. The monitoring systems must be approved by the Department prior to installation.

E. Monitor Location

When the effluents from two (2) or more affected steam generators of similar design and operating characteristics are combined before released to the atmosphere, the opacity monitoring system(s) shall be installed on the combined effluent. When the affected steam generators are not of similar design and operating characteristics, or when the effluent from one (1) affected steam generator is released to the atmosphere through more than one (1) point, the owner or operator shall apply for an alternate procedure to comply with the requirements of Section IV.

F. Exemptions from Monitoring Requirements

Whenever the requirements for continuous opacity monitoring cannot be implemented by the owner or operator due to physical source limitations, extreme economic burden, or infrequent steam generator operation of less than thirty (30) days per year, or when the specified monitoring procedure would not provide accurate opacity determinations, alternate monitoring and reporting requirements may be approved on a case-by-case basis provided the owner or operator submits a written request to the Department which includes, but is not limited to:

1. The basis or reason(s) that alternate requirements are necessary;

2. A proposal of the alternate monitoring and reporting requirements; and

3. Any other information needed by the Department to make a determination that the alternate requirements are adequate to meet the intent of Section IV.

SECTION V - EXEMPTIONS

The following sources shall be exempt from the provisions of this standard:

A. Residences of four (4) families or less.

B. Ocean-going vessels actually engaged in the physical process of national or international trade or defense.

SECTION VI - PERIODIC TESTING

An owner or operator of any source listed below shall ensure that scheduled periodic tests for particulate matter emissions are conducted every two (2) years or as required by permit conditions and are performed in accordance with the provisions of Regulation 61-62.1, Section IV, Source Tests. An owner or operator shall demonstrate compliance with SO_2 emissions by source testing, continuous monitoring, or fuel analysis as required by permit conditions.

A. Oil-fired boilers greater than 250×10^6 Btu/hr rated input.

B. Coal-fired boilers greater than 50×10^6 Btu/hr rated input.

C. Woodwaste or combination woodwaste boilers greater than 20×10^6 Btu/hr rated input.

SECTION VII - [RESERVED]

R. 61-62.5, Standard No. 1 History - *South Carolina State Register*:

Vol. 7, Issue No. 2, (Doc. No. ?), February 25, 1983;
Vol. 9, Issue No. 5, (Doc. No. 457), May 24, 1985;
Vol. 13, Issue No. 2, (Doc. No. 868), February 24, 1989;
Vol. 12, Issue No. 4, (Doc. No. 970), April 22, 1988;
Vol. 22, Issue No. 6, (Doc. No. 2244), June 26, 1998;
Vol. 25, Issue No. 10, (Doc. No. 2648), October 26, 2001;
Vol. 35, Issue No. 5, (Doc. No. 4130), May 27, 2011;
Vol. 36, Issue No. 5, (Errata), May 25, 2012;
Vol. 36, Issue No. 9, (Errata), September 28, 2012;
Vol. 38, Issue No. 6, (Doc. No. 4388), June 27, 2014;
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Vol. 40, Issue No. 9, (Doc. No. 4650), September 23, 2016.

SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.5
AIR POLLUTION CONTROL STANDARDS

STANDARD NO. 2
AMBIENT AIR QUALITY STANDARDS

The following table, unless otherwise noted, constitutes the primary and secondary ambient air quality standards for the State of South Carolina. The computations for determining if the applicable standard is met, along with the analytical methods to be used, will be those applicable Federal Reference Methods and Interpretations published in the Appendices to 40 Code of Federal Regulations (CFR) 50, or those methods designated as Federal Equivalent Methods (FEM) in accordance with 40 CFR 53. In the case of Gaseous Fluorides, either the double paper tape sampler method (ASTM D-3266-91 or later), the sodium bicarbonate-coated glass tube and particulate filter method (ASTM D-3268-91 or later), or an approved method may be used.

Pollutant	**Reference**	**Measuring Interval**	**Standard Level**			
			mg/m^3	**$\mu g/m^3$**	**ppm**	**ppb**
Sulfur Dioxide	40 CFR 50.4 40 CFR 50.5	3 hour (secondary)	-	1300	0.5	-
	40 CFR 50.17	1- hour (primary)	-	-	-	75
PM_{10}	40 CFR 50.6	24 hour	-	150	-	-
$PM_{2.5}$	40 CFR 50.13	24 hour (primary)	-	35	-	-
	40 CFR 50.18	Annual (primary)	-	12	-	-
		24 hour (secondary)	-	35		
		Annual (secondary)	-	15		
Carbon Monoxide	40 CFR 50.8	1 hour (no secondary)	40	-	35	-
		8 hour (no secondary)	10	-	9	-
Ozone						
	40 CFR 50.15	8 hour (2008)	-	-	0.075	-
	40 CFR 50.19	8 hour (2015)	-	-	0.070	-
Nitrogen Dioxide	40 CFR 50.11	Annual	-	100	0.053	53
		1-hour				100

Pollutant	Reference	Measuring Interval	Standard Level			
			mg/m^3	**$\mu g/m^3$**	**ppm**	**ppb**
Lead	40 CFR 50.16	Rolling 3-month Average	-	0.15	-	-

R. 61-62.5, Standard No. 2 History - *South Carolina State Register*:

Vol. 9, Issue No. 5, (Doc. No. 457), May 24, 1985;
Vol. 12, Issue No. 4, (Doc. No. 970), April 22, 1988;
Vol. 13, Issue No. 2, (Doc. No. 868), February 24, 1989;
Vol. 28, Issue No. 9, (Doc. No. 2912), September 24, 2004;
Vol. 32, Issue No. 10, (Doc. No. 3224), October 24, 2008;
Vol. 33, Issue No. 10, (Doc. No. 4082), October 23, 2009;
Vol. 36, Issue No. 4, (Doc. No. 4280), April 27, 2012;
Vol. 36, Issue No. 9, (Errata), September 28, 2012;
Vol. 38, Issue No. 9, (Doc. No. 4465), September 26, 2014;
Vol. 39, Issue No. 6, (Doc. No. 4481), June 26, 2015.
Vol. 40, Issue No. 9, (Doc. No. 4650), September 23, 2016.

SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.5
AIR POLLUTION CONTROL STANDARDS

STANDARD NO. 3
WASTE COMBUSTION AND REDUCTION

SECTION I - APPLICABILITY

A. Except as provided for in paragraphs J and K of this section, this standard applies to any source, regardless of type or construction date, which burns any waste other than virgin fuel for any purpose.

B. Municipal Waste Combustion facilities constructed, reconstructed or modified on or before September 20, 1994, with a unit capacity greater than 250 tons per day of Municipal Solid Waste (MSW) shall be subject to 40 Code of Federal Regulations (CFR) 60, Subpart Cb, Emission Guidelines and Compliance Schedules for Municipal Waste Combustors, promulgated December 19, 1995, 60 Federal Register (FR) 65415, and amended August 25, 1997, 62 FR 45119 and 45125 and the South Carolina Air Quality Implementation Plan. For the purposes of this standard, the definitions contained in the various provisions of 40 CFR 60, adopted herein, shall apply except that the term "Administrator," when used in 40 CFR 60, shall mean the Department. These Municipal Waste Combustors shall also be subject to any provision of this standard that would impose a more restrictive emission limit or requirement.

C. Sources burning more than one type of waste are subject to the most restrictive requirements of this standard for the wastes being burned.

D. Hospital/medical/infectious waste incinerators are subject to Standard No. 3.1 of Regulation 61-62.5.

E. Hospital/medical/infectious waste incinerators burning other waste in addition to medical waste are subject to the requirements of this standard that are more restrictive than those found in Standard No. 3.1 for the waste being burned.

F. Municipal waste combustors subject to 40 CFR 60, Subpart Ea; 40 CFR 60, Subpart Eb; or 40 CFR 60, Subpart Cb are subject to more restrictive requirements of this standard applicable to the waste being burned.

G. Municipal waste combustors, excluding air curtain incinerators, subject to this standard that meet the definition of retail business incinerators or commercial incinerators are subject only to the requirements of this standard applicable to those units.

H. Any unit that burns tires as its only MSW is not subject to the portions of this standard applicable to Municipal Waste Combustors if the owner or operator of the unit:

1. Notifies the Department of an exemption claim; and

2. Provides data documenting that the unit qualifies for this exemption.

I. Air curtain incinerators subject to this standard whose only municipal solid waste being burned is yard waste are subject only to those requirements of this standard applicable to air curtain incinerators. Air curtain incinerators subject to this standard that burn any other municipal solid waste other than yard waste are subject only to the requirement of having refractory lined pits that is applicable to air curtain incinerators and to all the requirements of this standard applicable to municipal waste combustors.

J. Exemptions

1. Industrial furnaces and boilers at pulp and paper facilities burning only black liquor, only total reduced sulfur (TRS) compounds, or only black liquor and/or TRS compounds and/or virgin fuel are not subject to this standard. Also, total reduced sulfur control devices burning only gaseous TRS and virgin fuel are not subject to this standard. Gaseous process streams containing TRS compounds that are regulated in accordance with Section XI of Regulation 61-62.5, Standard No. 4, Emissions from Process Industries, and/or 40 CFR 60, Subpart BB, Standards of Performance for Kraft Pulp Mills, are also not subject to this standard. Exemptions for additional process streams will be considered on a case-by-case basis. Additions to black liquor for the purpose of waste disposal shall not be exempt from this standard.

2. Facilities utilizing a renewable energy resource burned for energy recovery may request an exemption from this standard by: 1) submitting a site-specific chemical analysis of the renewable energy resource and/or source testing results to the Department for review, and 2) providing additional documentation as necessary so that the Department can confirm that the exemption will be protective of human health and the environment. The Department reserves the right to deny a request for an exemption to Standard No. 3 for any renewable energy resource(s) that does not satisfy the above conditions.

3. A facility with an emission unit and/or control device that complies with all the requirements of an applicable Maximum Achievable Control Technology (MACT) Standard under 40 CFR 63, including the testing and reporting requirements, may request an exemption from this standard. Facilities requesting such an exemption shall provide any documentation as necessary in order for the Department to make a determination. Upon review of such a request, the Department may grant an exemption from this standard if it determines that compliance with the applicable MACT Standard(s) would be as protective of human health and the environment as the requirements of this standard. Any new waste and/or process stream must be evaluated by the Department in order to maintain this exemption. Also, any operational change that may impact emissions from the waste must be evaluated by the Department in order to maintain this exemption.

K. Space heaters engineered to burn used oil will be exempt from this standard provided the used oil is generated on-site or originates from "do-it-yourself" oil changes and provided also that the burners are rated at no more than 0.5×10^6 British thermal unit per hour (Btu/hr) heat input and the exhaust is vented to the ambient air. No construction or operating permit will be required.

L. This standard was effective on the date of publication in the State Register, which was originally February 26, 1988. Subsequent dates of effective revisions published in the State Register will be indicated at appropriate places as necessary in this standard.

M. For the purpose of this standard, existing sources are sources that are "in existence" on February 26, 1988, unless otherwise noted herein.

SECTION II - GENERAL

This standard will not supersede any other state or federal requirements including but not limited to federal New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), state or federal Prevention of Significant Deterioration (PSD) Regulations, Hazardous Waste Management Regulations, nor special permit conditions, unless a more restrictive emission limit or requirement is imposed by this standard.

SECTION III - EMISSION LIMITATIONS AND OPERATING REQUIREMENTS

A. Case-by-Case Limitations - Emission limitations other than those stated below, determined in part by material being incinerated or burned and/or by source testing, may be set on a case-by-case basis.

B. Retail Business Incinerators

1. Opacity shall not exceed 20 percent.

2. Particulate Matter (PM) - No established limit.

C. Crematory Incinerator

1. Opacity shall not exceed 10 percent.

2. PM - No established limit.

D. Sludge Incinerators

1. Opacity shall not exceed 20 percent.

2. Particulate matter emissions shall not exceed 1.3 pounds per ton (lb/ton) of dry sludge.

3. Mercury (Hg) emissions shall not exceed 3200 grams/day.

E. Hazardous Waste Incinerators

1. Opacity shall not exceed 10 percent.

2. Hydrochloric acid (HCl) emissions may exceed 4 pounds per hour (lb/hr) only if they are controlled with an efficiency of at least 99 percent.

3. Particulate matter emissions shall not exceed 0.08 grains/Dry Standard Cubic Feet (DSCF) corrected to 7 percent oxygen (O_2) measured on a dry basis.

4. Other emission limits are as follows:

TABLE I

Material	Emission Limit[a]
Nickel (Ni)	6.0×10^{-3} lb / 10^6 Btu total heat input
Cadmium (Cd)	1.0×10^{-4} lb / 10^6 Btu total heat input
Chromium (Cr)	5.0×10^{-4} lb / 10^6 Btu total heat input

Arsenic (As)	2.5×10^{-4} lb / 10^6 Btu total heat input
Lead (Pb)	5.0×10^{-3} lb / 10^6 Btu total heat input

[a.] The total heat input value shall include the Btu from the waste and virgin fuel used for production. Furthermore, the total heat input value shall not exceed the Btu used to affect the combustion of the waste and shall not include any Btu input from auxiliary burners located outside of the primary combustion chamber such as those found in secondary combustion chambers, tertiary combustion chambers or afterburners unless those auxiliary burners are fired with waste. In the case where waste is fired in the auxiliary burners located outside of the primary combustion chamber, only the Btu value of the fuel for the auxiliary burner which is from waste shall be added to the total heat input value.

5. All principal organic hazardous constituents (POHC) must be destroyed with an efficiency of at least 99.99 percent.

6. All POHC must be destroyed with an efficiency of at least 99.9999 percent when the waste being burned is hazardous wastes F020, F021, F022, F023, F026, or F027 as specified in the South Carolina Hazardous Waste Management Regulation 61-79.264.343(a)(2). A demonstration of this efficiency must be performed as specified in the referenced paragraph. The definitions of hazardous wastes F020, F021, F022, F023, F026, and F027 can be found in the South Carolina Hazardous Waste Management Regulation 61-79.261.31(a).

F. Municipal Waste Combustors (effective June 25, 1999)

1. Opacity shall not exceed 20 percent.

2. Particulate matter (PM) emissions shall not exceed:

a. Existing sources - 0.08 grains/DSCF corrected to 7 percent O_2.

b. New sources - "Best Available Control Technology" (BACT) as defined in Regulation 61-62.5, Standard No. 7, (b)(8).

3. Carbon monoxide (CO) emissions, as measured at a location upstream of the control devices, shall not exceed those values listed in Table II, corrected to 7 percent O_2 on a dry basis except as provided in paragraph 4 below.

TABLE II

Municipal Waste Combustor Technology[a]	CO emission limit (ppmv)[b]	Averaging time (hrs)
Mass burn waterwall	100	4
Mass burn refractory	100	4
Mass burn rotary refractory	100	24
Mass burn rotary waterwall	250	24
Modular starved air	50	4
Modular excess air	50	4
Refuse-derived fuel stoker	200	24
Bubbling fluidized bed combustor	100	4
Circulating fluidized bed combustor	100	4

Municipal Waste Combustor Technology[a]	CO emission limit (ppmv)[b]	Averaging time (hrs)
Pulverized coal/refuse-derived fuel mixed fuel-fired combustor	150	4
Spreader stoker coal/refuse-derived fuel mixed fuel-fired combustor	200	24
Other	100	4

[a] As defined in 40 CFR 60 Subpart Eb

[b] Measured at the combustor outlet in conjunction with a measurement of oxygen concentration, corrected to 7 percent O_2, CO and O_2 shall be measured on a dry basis.

4. Cement kilns burning municipal solid waste may exceed the values listed in Table II provided they do not exceed 20 parts per million by volume (ppmv) total hydrocarbons (THC) hourly average, as propane (as determined by Environmental Protection Agency (EPA) Reference Method 25A (40 CFR 60, Appendix A) or from Continuous Emission Monitors (CEMs) meeting Performance Specification 2.2 of 40 CFR 266, Appendix IX), measured at the kiln outlet corrected to 7 percent O_2, both measured on a dry basis.

5. Hydrochloric acid (HCl) emissions shall not exceed:

a. Existing sources - 250 ppmv corrected to 7 percent O_2, both measured on a dry basis, hourly average; or a 50 percent reduction by weight or volume, whichever is less stringent.

b. New sources - 30 ppmv, hourly average, corrected to 7 percent O_2, both measured on a dry basis; or the facility shall install emission controls that, on the date of the permit to construct, meet the criteria of BACT as defined in Regulation 61-62.5, Standard No. 7, (b)(8).

6. Combustion efficiency (C.E.) shall be at least 99.9 percent on an hourly basis, computed as follows:

$$C.E. = [CO_2]/([CO_2] + [CO]) \times 100$$

where:

$[CO_2]$ = Concentration of carbon dioxide (ppmv corrected to 7 percent O_2) measured on a dry basis; and
[CO] =Concentration of carbon monoxide (ppmv corrected to 7 percent O_2) measured on a dry basis.

7. The combustor shall maintain the combustion chamber exit gases at a required temperature greater than the temperature at which compliance was demonstrated through source test for particulate matter emissions, CO emissions and combustion efficiency. The combustor shall be equipped with automatically controlled auxiliary fuel burners to maintain the combustion at the required temperature under all waste firing conditions and to ensure that the combustor will reach the required temperature prior to the introduction of waste. To confirm the temperature, a thermocouple shall be appropriately located at the exit of the combustion chamber such that the flames do not impinge on the sensor.

8. The firing of the burners and the combustion air shall be modulated automatically to maintain the required combustion chamber exit temperature.

9. Large, bulky non-combustibles (for example, water heaters, refrigerators) and difficult to

burn, bulky combustible materials (for example, mattresses, sofas) shall not be charged to the combustor.

10. Tipping areas shall be enclosed and maintained at a negative pressure. The evacuated air from the tipping area shall be used as primary combustion air in the combustor. Open storage of municipal waste is prohibited.

11. Open storage of ash is prohibited. Ash shall be loaded in an enclosed area or handled wet in enclosed containers.

12. Any visible emissions of ash from an ash conveying system including conveyor transfer points shall not exceed 5 percent of the observation period (that is, 9 minutes per 3-hour period), as determined by EPA Reference Method 22 (40 CFR 60, Appendix A) observations. The minimum observation time shall be a series of three one-hour observations that include times when the facility is transferring ash from the municipal waste combustor to the area where ash is stored or loaded into containers or trucks. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. This emission limit does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, this emission limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

13. The source owner or operator shall prepare and submit for Department approval an inspection and maintenance plan and a plan of action for the facility prior to startup. The inspection and maintenance plan shall include calibration, inspection and maintenance schedules along with operating and monitoring parameters for the combustor, associated control equipment and monitoring devices. The plan of action shall identify the steps and procedures the operator will follow to avoid exceedances of the emission limits and operating conditions specified in paragraphs F.1 thru F.7 and F.12 of this section. The plan shall include descriptions of startup and shutdown procedures, actions to be taken to correct anomalous operating conditions and training of plant operators.

14. The combustor shall be equipped with an automatic loader or a sealed feeding device and equipped with the interlocks specified in paragraph 15 below.

15. The charging of waste to the combustor shall automatically cease through the use of an interlock system when any of the following conditions exist:

a. The average combustion chamber exit temperature drops below the required temperature for a rolling 15-minute period;

b. The average flue gas oxygen level drops below 3 percent (dry basis) for a rolling 15-minute period;

c. The average opacity of the visible emissions is equal to or greater than 20 percent for a rolling 15- minute period;

d. The average combustion efficiency drops below 99.5 percent for a rolling 15-minute period; or

e. The monitoring equipment required by Section VI.A.2.e of this standard is not functioning.

16. Some deviation from the above temperature, flue gas oxygen, and CO limits may be permissible for those combustors utilizing advanced combustion technologies or burning specially

prepared municipal solid wastes.

17. Startup and Shutdown Requirements:

a. No waste shall be charged to the combustor until the required combustion chamber exit temperature reaches equilibrium. Control equipment shall be operating and functioning properly before waste is introduced into the combustor and until all the wastes are combusted or extinguished;

b. During shutdowns the required combustion chamber exit temperature is to be maintained using auxiliary burners until the wastes are completely combusted or extinguished; and

c. A detailed procedure for normal system startup and shutdown shall be submitted as a part of the application for approval including the duration of preheat and burnout cycles.

G. Air Curtain Incinerator

1. Opacity shall not exceed 20 percent, except that an opacity level of up to 35 percent is permitted during startup periods during the first 30 minutes of operation of the unit.

2. Air curtain incinerators shall be required for the burning of yard waste (excluding plastic bags), land clearing waste consisting of only untreated natural wood debris, and non-treated or unfinished woodwaste that does not occur on the premises on which it originates. This requirement may be waived for non-reoccurring instances.

3. Refractory lined pits shall be required.

4. Performance Requirements:

a. The amount of material to be incinerated shall not exceed 38,325 tons per year without a PSD review. Records of tons per year incinerated shall be kept and maintained for at least two years and made available to the Department upon request;

b. Onsite storage of debris to be incinerated shall be kept to a minimum;

c. Material to be incinerated shall be incinerated within one week of storage unless otherwise approved by the Department;

d. This air curtain incinerator is permitted to burn only yard waste (excluding plastic bags), land clearing waste consisting of only untreated natural wood debris, untreated or unfinished woodwaste, and clean wood;

e. An operation and maintenance program shall be developed and adhered to at all times to ensure the proper operation of this facility;

f. Good operation practices shall be exercised to minimize emissions from incineration. This shall include the wetting of ash prior to removal from the air curtain incinerator;

g. Winds during the time of burning or ash removal must be away from any area in which the ambient air may be significantly affected by the smoke or ash from this operation if that area contains a public roadway or a residential, commercial, or industrial site;

h. All ash shall be stored in compliance with the requirements of the South Carolina Solid Waste Management Regulation 61-107.12;

i. No burning shall take place if the air curtain incinerator is not operating properly or at its design air flow;

j. The air curtain incinerator shall be used at all times that the pit contains burning permitted material except during startup to get the fire ignited;

k. The air curtain incinerator shall be located so as to maximize the distance to business and residential areas and shall be located at least 500 feet from any business or residence located on adjacent properties;

l. Access roads and loader work areas shall be maintained in such a manner so as to minimize fugitive emissions. This shall include the use of water sprays, dust controlling chemicals (but not volatile organic compounds) or other Department approved dust suppression systems;

m. Stacking rakes or similar devices shall be utilized on loader equipment when loaders are used to charge the pit in order to minimize dirt on the material to be burned; and

n. Any change in location of the air curtain incinerator must have prior written approval from the Department.

5. PM - No established limit.

H. Commercial Incinerators (effective June 25, 1999)

1. Opacity shall not exceed 20 percent.

2. Particulate matter emissions shall not exceed 0.15 grains / DSCF corrected to 7 percent O_2 on a dry basis.

3. CO emissions shall not exceed 100 ppmv hourly average corrected to 7 percent O_2. CO and O_2 shall be measured on a dry basis.

4. The unit shall maintain the combustion gases at a temperature greater than the temperature at which compliance was demonstrated through source test for particulate matter and CO emissions. The unit shall be equipped with automatically controlled auxiliary fuel burners to maintain the combustion gases at the required temperature under all waste firing conditions and to ensure that the unit will reach the required temperature prior to the introduction of waste. To confirm the temperature, a thermocouple shall be appropriately located at the exit of the combustion chamber such that the flames do not impinge on the sensor.

5. The firing of the burners and the combustion air shall be modulated automatically to maintain the required temperature.

6. Open storage of ash is prohibited. Ash shall be loaded in an enclosed area or handled wet in enclosed containers.

7. Startup and Shutdown Requirements:

a. No waste shall be charged to the incinerator until the required combustion chamber exit temperature reaches equilibrium;

b. During shutdowns, the required combustion chamber exit temperature is to be maintained using auxiliary burners until the wastes are completely combusted or extinguished; and

c. A detailed procedure for normal system startup and shutdown shall be submitted as a part of the application for approval including the duration of preheat and burnout cycles.

I. Industrial Incinerators

1. Opacity shall not exceed 20 percent.

2. Particulate matter emissions shall not exceed 0.5 lbs/10^6 Btu total heat input. The total heat input value from waste and virgin fuel used for production shall not exceed the Btus used to affect the combustion of the waste and shall not include any Btu input from auxiliary burners located outside of the primary combustion chamber such as those found in secondary combustion chambers, tertiary combustion chambers or afterburners unless those auxiliary burners are fired with waste. In the case where waste is fired in the auxiliary burners located outside of the primary combustion chamber, only the Btu value of the fuel for the auxiliary burner which is from waste shall be added to the total heat input value.

3. Industrial incinerators with a total design capacity of less than $1x10^6$ Btu/hr including auxiliary devices used to recondition parts shall be exempt from all requirements of this standard except for the following:

a. Opacity shall not exceed 20 percent; and

b. Records documenting the contaminant being removed and possible emissions from the process shall be maintained and made available for Department review.

J. Industrial Boilers and Utility Boilers

1. Emission limits as stated in Table III shall apply. More restrictive opacity and/or mass emission limits than specified in Regulation 61-62.5, Standard No. 1 may be imposed based on source test results to ensure compliance with these limits.

TABLE III[b]

Material	Emission Limit[a]
Nickel (Ni)	6.0×10^{-3} lb / 10^6 Btu total heat input
Cadmium (Cd)	1.0×10^{-4} lb / 10^6 Btu total heat input
Chromium (Cr)	7.4×10^{-4} lb / 10^6 Btu total heat input
Arsenic (As)	1.7×10^{-3} lb / 10^6 Btu total heat input
Lead (Pb)	5.0×10^{-3} lb / 10^6 Btu total heat input
Hydrochloric Acid (HCl)	0.45 lb / 10^6 Btu total heat input

[a] The total heat input value shall include the Btu from the waste and virgin fuel used for production. Furthermore, the maximum total heat input value to be used in determining the emission limitations shall be limited to the Btus necessary to maintain production. The Btu from other sources such as afterburners shall not be considered in determining this total heat input value unless those auxiliary burners are fired with waste. In the case where waste is fired in the auxiliary burners located outside

of the primary combustion chamber, only the Btu value of the fuel for the auxiliary burner which is from waste shall be added to the total heat input value.

[b] Source testing for metals or HCl will not be required at facilities burning waste with no metals or chlorine in the waste. Analysis showing these constituents to be nondetectible by reference method in the waste would be an alternative method for determining compliance with emission limits as allowed by Regulation 61-62.5, Standard No. 3, Section VIII(A).

2. HCl emissions may exceed 0.45 lb/10^6 Btu total heat input only if the HCl emissions are controlled with an efficiency of at least 99 percent.

3. All principal organic hazardous constituents (POHC) must be destroyed with an efficiency of at least 99.99 percent (only if burning hazardous waste).

4. All POHC must be destroyed with an efficiency of at least 99.9999 percent when the waste being burned is hazardous wastes F020, F021, F022, F023, F026, or F027 as specified in the South Carolina Hazardous Waste Management Regulation 61-79.264.343(a)(2). A demonstration of this efficiency must be performed as specified in the referenced paragraph. The definitions of hazardous wastes F020, F021, F022, F023, F026, and F027 can be found in the South Carolina Hazardous Waste Management Regulation 61-79.261.31(a).

5. Any boiler less than 10 x 10^6 Btu/hr rated heat input will be restricted to the use of virgin fuel and/or spec. oil.

6. Sources burning small quantities of waste that is generated by the owner/operator and is burned as described in Table IV below, are exempt from the requirements of this standard except as follows:

a. There must be a valid permit for the boiler which specifies the exact waste to be burned;

b. Analysis may be required to prove that the material to be burned is one of the substances authorized by the permit; and

c. Records of the material being burned (that is, gallons per month or tons per month) and its firing rate must be kept and made available to the Department upon request.

TABLE IV

Boiler Size (1 x 10^6 Btu/hr)	Waste Firing Rate (heat input of waste/ design heat input of unit)
>10 - 50	0.1
>50	0.06

7. Sources burning specification used oil are exempt from the emissions limitations listed in Table III, provided paragraphs 6a and 6b above are complied with.

K. Non-Industrial Boilers - Regardless of size, non-industrial boilers, with the exception of utility boilers, are restricted to the use of virgin fuels and/or spec. oil.

L. Industrial Furnaces

1. Emission limits as stated in Section III, Table III, shall apply. More restrictive opacity and/or mass emission limits than specified in Regulation 61-62.5, Standard No. 4 may be required based on source test results to ensure compliance with these limits.

2. All principal organic hazardous constituents (POHC) must be destroyed with an efficiency of at least 99.99 percent (only if burning hazardous waste).

3. All POHC must be destroyed with an efficiency of at least 99.9999 percent when the waste being burned is hazardous wastes F020, F021, F022, F023, F026, or F027 as specified in the South Carolina Hazardous Waste Management Regulation 61-79.264.343(a)(2). A demonstration of this efficiency must be performed as specified in the referenced paragraph. The definitions of hazardous wastes F020, F021, F022, F023, F026, and F027 can be found in the South Carolina Hazardous Waste Management Regulation 61-79.261.31(a).

4. Any furnace less than 10 x 10^6 Btu/hr rated heat input will be restricted to the use of virgin fuel and/or spec. oil.

5. Sources burning small quantities of waste that is generated by the owner/operator and is burned as described in Table V below, are exempt from the requirements of this standard except as follows:

a. There must be a valid permit for the furnace which specifies the exact waste to be burned;

b. Analysis may be required to prove that the material to be burned is one of the substances authorized by the permit; and

c. Records of the material being burned (that is, gallons per month or tons per month) and its firing rate must be kept and made available to the Department upon request.

TABLE V

Furnace Size (1 x 10^6 Btu/hr)	Waste Firing Rate (heat input of waste/ design heat input of unit)
>10 - 50	0.1
>50	0.06

6. Sources burning specification used oil are exempt from the emissions limitations listed in Table III, provided paragraphs 5a and 5b above are complied with.

7. HCl emissions may exceed 0.45 lb/10^6 Btu total heat input only if the HCl emissions are controlled with an efficiency of at least 99 percent.

M. Non-Industrial Furnaces - Regardless of size, non-industrial furnaces are restricted to the use of virgin fuels and/or spec. oil.

N. Combination Sources - When a source engages in activities that can be construed as being in more than one classification, the more restrictive limitations will apply.

SECTION IV - NOTIFICATION REQUIREMENTS AND COMPLIANCE SCHEDULES

A. Sources in Existence on the Effective Dates of the Standard

1. All sources subject to source testing must be in compliance within one year of February 26, 1988, unless otherwise stated in this standard. Other requirements for specific source types are listed below.

2. Specific Source Types

a. Retail Business Incinerators - Compliance will be required as of February 26, 1988.

b. Crematory Incinerator - Compliance will be required as of February 26, 1988.

c. Sludge Incinerators - Compliance with the opacity limitation will be required as of February 26, 1988.

d. Hazardous Waste Incinerators

(i) All hazardous waste incinerators must notify the Department in writing of their intent to operate, including information regarding the fuel and waste (amount, type(s), specification/analyses) and method of operation within 60 days of February 26, 1988, unless otherwise stated in this standard. The Department will notify the source within 30 days of receipt of this information if a formal permit application is needed.

(ii) Hazardous waste incinerators that require a permit application must make this submittal within 90 days of notification by the Department that a permit application is required.

(iii)Compliance with the opacity limitation will be required as of February 26, 1988.

e. Municipal Waste Combustors

(i) All municipal waste combustors must notify the Department in writing of their intent to operate, including information regarding the fuel and waste (amount, type(s), specification/analyses) and method of operation within 60 days of June 25, 1999, unless otherwise stated in this standard. The Department will notify the source within 30 days of receipt of this information if a formal permit application is needed.

(ii) Municipal waste combustors that require a permit application must make this submittal within 90 days of notification by the Department that a permit application is required.

(iii)Compliance with the opacity limitation will be required as of February 26, 1988.

f. Air Curtain Incinerators

(i) Compliance with Section III.G.1 will be required as of February 26, 1988.

(ii) Compliance with Section III.G.2. and G.4. will be required within 180 days of May 25, 1990.

(iii)Compliance with Section III.G.3. shall be required within 180 days of May 25, 1990, for all permanent sites (that is, sites used more than six months) and within three years of May 25, 1990, for all portable air curtain incinerators used at temporary sites.

g. Commercial Incinerators

(i) All commercial incinerators must notify the Department in writing of their intent to operate, including information regarding the fuel and waste (amount, type(s), specification/analyses) and method of operation within 60 days of June 25, 1999 unless otherwise stated in this standard. The Department will notify the source within 30 days of receipt of this information if a formal permit application is needed.

(ii) Commercial incinerators that require a permit application must make this submittal within 90 days of notification by the Department that a permit application is required.

(iii)Compliance with the opacity limitation will be required as of February 26, 1988.

h. Industrial Incinerators

(i) All industrial incinerators must notify the Department in writing of their intent to operate, including information regarding the fuel and waste (amount, type(s), specification/analyses) and method of operation within 60 days of February 26, 1988, unless otherwise stated in this standard. The Department will notify the source within 30 days of receipt of this information if a formal permit application is needed.

(ii) Industrial incinerators that require a permit application must make this submittal within 90 days of notification by the Department that a permit application is required.

(iii)Compliance with the opacity limitation will be required as of February 26, 1988.

i. Industrial Boilers and Utility Boilers

(i) All industrial boilers and utility boilers must notify the Department in writing of their intent to operate, including information regarding the fuel and waste (amount, type(s), specification/analyses) and method of operation within 60 days of February 26, 1988, unless otherwise stated in this standard. The Department will notify the source within 30 days of receipt of this information if a formal permit application is needed.

(ii) Industrial boilers and utility boilers that require a permit application must make this submittal within 90 days of notification by the Department that a permit application is required.

j. Non-Industrial Boilers - Compliance will be required as of February 26,

1988.

k. Industrial Furnaces

(i) All industrial furnaces must notify the Department in writing of their intent to operate, including information regarding the fuel and waste (amount, type(s), specification/analyses) and method of operation within 60 days of February 26, 1988, unless otherwise stated in this standard. The Department will notify the source within 30 days of receipt of this information if a formal permit application is needed.

(ii) Industrial furnaces that require a permit application must make this submittal within 90 days of notification by the Department that a permit application is required.

l. Non-Industrial Furnaces - Compliance will be required as of February 26, 1988.

B. New Sources - Any source to which this standard is applicable and which is not in existence on the effective dates of this standard must be in compliance with the applicable portions of this standard on the date operation of the source begins.

SECTION V - WASTE ANALYSIS (effective June 25, 1999)

A. Regardless of the type source involved, each waste stream (if the waste is deemed to be consistent in composition) or each waste batch/shipment (if the waste is deemed inconsistent in composition) that is to be burned shall be classified hazardous or non-hazardous utilizing the South Carolina Hazardous Waste Management Regulation 61-79.261. This classification decision may be based on generator knowledge of the waste determined from Material Safety Data Sheets (MSDS), waste profiles, or other process information.

B. Regardless of the type of source involved, with the exception of crematory and air curtain incinerators, each waste stream (if the waste is deemed to be consistent in composition) or each waste batch/shipment (if the waste is deemed inconsistent in composition) that is to be burned shall be analyzed for heat value British thermal unit per gallon (Btu/gal) and/or British thermal unit per pound (Btu/lb), total halogen, percent nitrogen and percent sulfur.

C. Regardless of the type of source involved (except retail business, crematory and air curtain incinerators) each waste stream (if the waste is deemed to be consistent in composition) or each waste batch/shipment (if the waste is deemed inconsistent in composition) that is to be burned shall be identified by waste analysis or special knowledge of the waste (MSDS, waste profiles, etc.) for those air toxic compounds identified in Regulation 61-62.5, Standard No. 8 that can reasonably be expected to be in the waste stream.

D. Regardless of the type of source involved, each burner of used oil shall have each batch or shipment of used oil analyzed in order to determine if the used oil is spec. oil or non-spec. oil.

E. If a source has an air pollutant emission rate established in a permit other than opacity, particulate matter, nitrogen oxides (NO_X), sulfur dioxide (SO_2), and/or carbon monoxide, each waste stream (if the waste is deemed to be consistent in composition) or each waste batch/shipment (if the waste is deemed inconsistent in composition) that is to be burned shall be analyzed for those pollutants for which the emission rate was established that may reasonably be expected to be in the waste. When an HCl emission rate is set, HCl testing shall be required. Total halogens analysis may be performed as an alternative to

HCl testing although this method will yield a high HCl bias.

F. Other analyses as may be required by the Department in order to demonstrate compliance with applicable state or federal regulations and/or permit conditions.

G. Waste may be exempted from all or part of the analyses required in paragraphs A-F above on a case-by-case basis for any of the following reasons at the facility's discretion, unless the Department has a valid reason to require the analyses:

1. Special knowledge of the waste;

2. The waste composition is deemed to be consistent through prior analysis or special knowledge;

3. The waste constitutes less than 0.1 percent by weight of the daily design capacity throughput;

4. Ambient air modeling for compliance with Regulation 61-62.5, Standards No. 2 and No. 8 indicates that at the maximum waste firing rate and storage volume a particular constituent at its maximum potential concentration will be in compliance with the applicable standard; or

5. The waste is non-hazardous municipal solid or hospital/medical/infectious waste.

H. Analytical methods to be utilized in paragraphs A-F above include but are not limited to ASTM Standard Test Methods; those methods contained in the South Carolina Hazardous Waste Management Regulation 61-79.261 Subpart C and Subpart D which are incorporated by reference in the South Carolina Hazardous Waste Management Regulation 61-79.260.11; and/or other methodologies (that is, Standard Methods, state or federal regulations, or proposed methods) approved by the Department as long as proper QA/QC is provided.

I. All waste analyses shall be performed by a laboratory certified by the Department to perform the methodology or in accordance with a Department approved methodology.

J. All information used to determine compliance with this section (that is, MSDS, waste manifests, waste analyses) must be kept on-site for a period of five years and made available to the Department upon request.

K. The Department reserves the right to require a facility to cease combustion of any waste stream which creates an undesirable level as determined by the Department.

L. The Department reserves the right to conduct quality assurance audits by 'spiking', splitting samples, or any other methods deemed appropriate.

M. Combustion of any new or modified waste stream must be consistent with terms and conditions of any applicable regulation or permit requirement. Written notification shall be submitted to the Director of the Division of Engineering Services of the Department's Bureau of Air Quality at least 30 days prior to combusting any new or modified waste stream unless otherwise approved through permit conditions.

SECTION VI - CONTINUOUS MONITORING REQUIREMENTS

A. Monitoring

1. The owner/operator shall install, calibrate, maintain and operate monitoring devices as indicated below within one year from February 26, 1988. Required monitoring devices must meet the specifications of Section VII of this standard. Alternative site-specific methods of monitoring, other than those cited below, may be used provided prior approval from the Department is obtained. Other monitors may be required by permits as conditions warrant.

2. Specific Source Types

a. Retail Business Incinerators - None.

b. Crematory Incinerator - None.

c. Sludge Incinerator (effective June 25, 1999) - Monitoring devices if required by 40 CFR 60 Subpart O.

d. Hazardous Waste Incinerators

(i) The temperature must be continuously recorded as measured at the point of incineration.

(ii) The pressure drop across baghouses and scrubbers must be continuously measured and recorded.

(iii)The concentration of carbon monoxide in the effluent gas stream must be continuously measured and recorded.

(iv)The concentration of oxygen in the effluent gas stream must be continuously measured and recorded.

(v) The waste feed rate to the incinerator must be continuously measured and recorded.

e. Municipal Waste Combustor (effective June 25, 1999)

(i) The combustion chamber exit temperature shall be continuously measured and recorded. Sensors shall be located such that flames from the burners do not impinge on the sensors.

(ii) Pollution control performance gauges or meters as required by permit conditions.

(iii)Instruments for the continuous monitoring and recording of O_2, CO, CO_2, and opacity.

(iv)For cement kilns wishing to comply with the THC limit, instruments for the continuous monitoring and recording of THC.

(v) The Department reserves the right to require HCl monitors at any time if it is determined to be necessary.

(vi)The O_2, CO and CO_2 (and THC if applicable) monitors shall be co-

located upstream of the air pollution control devices. If the applicant chooses to comply with the HCl emission limitations by meeting the percent reduction or BACT reduction requirement, the HCl monitors, when required, shall be located upstream and downstream from the air pollution control device. If the applicant chooses to monitor the two locations with a single detector, the two locations should be sampled at an interval previously approved by the Department.

(vii)The Department reserves the right to require, at a later date, the owner/operator to provide telemetering of continuous monitoring data to the Department.

f. Air Curtain Incinerator - None.

g. Commercial Incinerator (effective June 25, 1999) - The combustion chamber exit temperature shall be continuously measured and recorded. Sensors shall be located such that flames from the burners do not impinge on the sensors.

h. Industrial Incinerators - Monitoring may be required as in item d. or e. above depending on the material being incinerated or burned and source test results.

i. Industrial Boilers and Utility Boilers - Monitoring may be required as in item d. or e. above depending on the material being incinerated or burned and source test results.

j. Non-Industrial Boilers - None.

k. Industrial Furnaces - Monitoring may be required as in item d. or e. above depending on the material being incinerated or burned and source test results.

l. Non-Industrial Furnaces - None.

B. Measurement and Recording Frequencies for Continuous Monitoring Systems

1. Temperature:

Monitors subject to this requirement shall take a minimum of one measurement every 15 seconds with this data recorded at least every successive 60 seconds. The minimum data recorder resolution shall be 50 degrees F (Fahrenheit).

2. Pressure Drop:

Monitors subject to this requirement shall take a minimum of one measurement every 15 minutes with this data recorded at least every successive 15 minutes. The minimum data recorder resolution shall be 0.2 inches H_2O (water).

3. Waste Flowmeters:

Monitors subject to this requirement shall take a minimum of one measurement every 60 seconds with this data recorded at least every successive 5 minutes. The minimum data recorder resolution shall be 5 percent of the design flow rate.

4. O_2 Monitor:

Monitors subject to this requirement shall take a minimum of one measurement every 15 minutes

with this data recorded at least every successive 15 minutes. The minimum data recorder resolution shall be 0.2 percent O_2.

5. CO Monitor:

Monitors subject to this requirement shall take a minimum of one measurement every 15 minutes with this data recorded at least every successive 15 minutes. The minimum data recorder resolution shall be 5 parts per million (ppm).

6. CO_2 Monitor:

Monitors subject to this requirement shall take a minimum of one measurement every 15 minutes with this data recorded at least every successive 15 minutes. The minimum data recorder resolution shall be 0.2 percent CO_2.

7. HCl Monitor:

Monitors subject to this requirement shall take a minimum of one measurement every 15 minutes with this data recorded at least every successive 15 minutes. The minimum data recorder resolution shall be 5 ppm.

8. Opacity Monitor:

Monitors subject to this requirement shall complete a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period. The minimum data recorder resolution shall be 0.5 percent opacity.

9. THC Monitor:

Monitors subject to this requirement shall take a minimum of one measurement every 15 minutes with the data recorded at least every successive 15 minutes. The minimum data recorder resolution shall be 1 ppm.

C. Recordkeeping

1. Any owner or operator subject to any of the provisions of this standard shall maintain a file of all measurements, data and correspondence relating to continuous monitoring systems, other monitoring devices, performance testing measurements, all continuous monitoring system performance evaluations, all continuous monitoring system or monitoring device calibration checks, and adjustments and maintenance performed on these systems or devices.

2. The owner or operator of any source subject to any of the provisions of this standard shall record the daily waste(s) charge rates and hours of operation (effective June 25, 1999).

3. Copies of all records and reports required under this section shall be available for inspection during normal working hours and copies shall be furnished within 10-working days after receipt of a written request from the Department.

4. Copies of all records and reports required under this section shall be retained by the owner/operator for five years after the date on which the record was made or the report submitted.

D. Reporting and Corrective Action

1. All sources subject to the monitoring provisions of this section will be required to report quarterly all exceedances of limits specified in the source's permit and this standard. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter.

2. Any source subject to this standard must report any changes in operating or monitoring parameters and/or any equipment malfunctions which result in exceedances of the emissions limitations herein, within 24 hours after the occurrence unless otherwise approved in a Department approved malfunction plan. This report shall be made to the appropriate Regional Environmental Quality Control Office. In addition, the flow of hazardous waste fed to the combustion source must be stopped until proper operating conditions are restored.

3. For those sources not required to have a continuous emission monitor for the specified pollutant, a detailed report shall be submitted to the Department within 30 days following any exceedance of limits specified in the source's permit and/or this standard unless otherwise approved in a Department approved malfunction plan. The report shall include at a minimum all of the elements listed in Regulation 61-62.1, Section II.J.1.c.

SECTION VII - CALIBRATION AND QUALITY ASSURANCE OF MONITORING DEVICES

A. Provisions of this section or other procedures approved by the Department, unless superseded by federal air regulations, are applicable to monitoring devices required under Section VI or required by permit conditions to establish compliance with this standard. The daily zero and span calibrations for all categories of continuous emission monitors shall comply with the requirements of 40 CFR 60.13(d)(1) and (d)(2) unless superseded by federal air regulations.

B. Specific Monitoring Devices

1. Thermometers/Thermocouples

a. Initial Calibration:

(i) Range: 3 points over the expected range of use.

(ii) Accuracy: plus or minus (±) 2.5 percent.

(iii)Method: Calibrate using National Institute of Standards and Technology (NIST) traceable methods and manufacturer’s specifications or other methods approved by the Department.

b. Quality Assurance:

Conduct weekly single or multipoint reference checks against NIST traceable thermometers/thermocouples or other methods approved by the Department, and recalibrate according to paragraph B.1.a above if this difference is greater than 2.5 percent.

2. Baghouse and Scrubber Pressure Drop Gauges

a. Initial Calibration:

(i) Range: 3 points over the expected range of use.

(ii) Accuracy: ± 5 percent.

(iii)Method: Calibrate against a certified gauge-oil manometer or other methods approved by the Department.

b. Quality Assurance:

Conduct weekly single point reference checks against a certified gauge-oil manometer and recalibrate according to paragraph B.2.a. above if the difference is greater than 5 percent.

3. Waste Flowmeters

a. Initial Calibration:

(i) Range: 3 flowrates over the expected range of use.

(ii) Accuracy: ± 3.0 percent.

(iii)Method: NIST traceable dynamic calibration procedure or other methods approved by the Department.

b. Quality Assurance:

Conduct weekly single point flowrate checks using a gravimetric vs. time procedure as described in manufacturer's specifications or other methods approved by the Department, and recalibrate according to paragraph B.3.a. above if the difference is greater than 3 percent.

4. O_2 Monitor

a. Initial Calibration:

The O_2 monitor must meet Performance Specifications 3, in 40 CFR 60, Appendix B and 40 CFR 60.13 (c), (d)(1), (e), (e)(2), and (f).

b. Quality Assurance (To Be Done Quarterly):

Challenge the monitor with low (25 percent of instrument span) and mid (50 percent of instrument span) EPA Protocol Number 1 or NIST traceable audit gases or challenge the monitor as prescribed in 40 CFR 60, Appendix F, Section 5.1.2. Recalibration according to paragraph B.4.a. above is required if the quarterly audit deviates by more than plus or minus (±) 15 percent from the audit gas concentrations. **NOTE**: Sufficient time for instrument stabilization must be allowed when challenging the monitor with audit gases.

5. CO Monitor

a. Initial Calibration:

The CO monitor must meet Performance Specification 4 or 4A if applicable, in 40 CFR 60, Appendix B, and 40 CFR 60.13 (c), (d)(1), (e), (e)(2), and (f).

b. Quality Assurance (To Be Done Quarterly):

Challenge the monitor with low (25 percent of instrument span) and mid (50 percent of instrument span) EPA Protocol Number 1 or NIST traceable audit gases or challenge the monitor as prescribed in 40 CFR 60, Appendix F, Section 5.1.2. Recalibration according to paragraph B.5.a. above is required if the quarterly audit deviates by more than plus or minus (±)15 percent from the audit gas concentrations. **NOTE**: Sufficient time for instrument stabilization must be allowed when challenging the monitor with audit gases.

6. CO_2 Monitor

a. Initial Calibration:

The CO_2 monitor must meet Performance Specifications 3, in 40 CFR 60, Appendix B, and 40 CFR 60.13 (c), (d)(1), (e), (e)(2), and (f).

b. Quality Assurance (To Be Done Quarterly):

Challenge the monitor with low (25 percent of instrument span) and mid (50 percent of instrument span) EPA Protocol Number 1 or NIST traceable audit gases or challenge the monitor as prescribed in 40 CFR 60, Appendix F, Section 5.1.2. Recalibration according to paragraph B.6.a. above is required if the quarterly audit deviates by more than plus or minus (±) 15 percent from the audit gas concentrations. **NOTE**: Sufficient time for instrument stabilization must be allowed when challenging the monitor with audit gases.

7. HCl Monitor:

Reserved (HCl continuous emission monitor performance specification currently under EPA development).

8. Opacity Monitor

a. Initial Calibration:

The opacity monitor must meet Performance Specification 1, in 40 CFR 60, Appendix B and 40 CFR 60.13 (c), (d)(1), (d)(2), (e), (e)(1), and (f).

b. Quality Assurance (To Be Done Annually):

Must be audited with low, medium and high neutral density filters.

9. THC Monitor

a. Initial Calibration:

The THC monitor must meet the Performance Specification 2.2 in 40 CFR 266, Appendix IX.

b. Quality Assurance and Recalibration:

As specified in Performance Specification 2.2 in 40 CFR 266, Appendix IX.

C. For monitoring devices not specified above, calibration and quality assurance of monitoring devices shall be approved by the Department on a case-by-case basis.

SECTION VIII - PERIODIC TESTING

A. An owner or operator of any source listed in paragraph D below shall ensure that scheduled periodic tests for the parameters associated with that source are conducted in accordance with Regulation 61-62.1, Section IV, Source Tests. These tests shall be performed within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility and every two years thereafter, except as otherwise noted herein. This requirement to conduct tests may be waived if an alternative method for determining compliance with emission limits can be developed which is acceptable to the Department. Department approval of the alternative method for determining compliance must be given prior to the compliance demonstration.

B. Unless more frequent testing is required by an applicable federal requirement, sources subject to a more restrictive requirement in Resource Conservation and Recovery Act (RCRA) or a promulgated Maximum Achievable Control Technology (MACT) Standard shall be excluded from the testing frequency requirements of Section VIII provided any additional parameters required by this section (for example, nickel) are tested and compliance demonstrations are performed at least every three years. Compliance demonstrations must be performed with a maximum frequency of three years for all pollutants listed in Section VIII, as applicable. Spiking for metals and HCl are not required for these periodic retests, but sources must conduct these tests on their normal highest metals and HCl containing waste streams.

C. Other tests may be required by special permit conditions as indicated by a case-by-case evaluation of material being incinerated or burned and by source testing.

D. Tests Required

Sources	Parameters
1. Sludge Incinerators	a. Particulate Matter (PM) b. Mercury (Hg)
2. Hazardous Waste Incinerators	a. Hydrochloric Acid (HCl) b. PM c. Oxygen (O_2) initially only d. Carbon Monoxide (CO) initially only e. Metals f. POHC Destruction & Removal Efficiency (DRE) initially only
3. Municipal Waste Combustors	a. PM b. HCl (effective 5/25/90) c. CO (effective 5/25/90) d. O_2 (effective 5/25/90) e. CO_2 (effective 5/25/90)
4. Commercial Incinerator (effective June 25, 1999)	a. PM b. CO
5. Industrial Incinerators	PM

Sources	Parameters
6. Industrial Boilers and Utility Boilers	a. PM b. Metals c. POHC Destruction & Removal Efficiency (DRE) initially only if burning hazardous waste d. CO if burning hazardous waste e. O_2 if burning hazardous waste f. HCl
7. Industrial Furnaces	a. PM b. Metals c. POHC Destruction & Removal Efficiency (DRE) initially only if burning hazardous waste d. CO if burning hazardous waste e. O_2 if burning hazardous waste f. HCl

E. A waiver of the POHC DRE test requirement may be granted for boilers operating under special conditions that ensure 99.99 percent DRE. Such conditions may include but are not limited to the following:

1. >50 percent of boiler heat input from fuel oil, natural gas, or pulverized coal;

2. Minimum waste heat value of 8000 Btu/lb;

3. Waste must be fired with an atomization system;

4. Boiler must be operated at >25 percent load; and

5. CO and O_2 flue gas limits with continuous monitoring requirements.

F. POHC DRE shall be determined by the following equation using mass emissions rates:

DRE = [(Inlet Organics - Stack Outlet Organics) ÷ Inlet Organics] x 100

SECTION IX - OPERATOR TRAINING REQUIREMENTS

A. Prior to the startup for new facilities and within one year of May 25, 1990, for existing facilities, all incinerator operators shall be trained by the equipment manufacturers' representatives and/or other Department approved qualified individuals and/or organizations as to proper operating practices and procedures. The content of the training program shall be submitted to the Department for approval. The applicant shall submit certification verifying the satisfactory completion of a training program prior to issuance of the operating permit. The applicant shall not operate the incinerator without an operator on-site who has satisfactorily completed the training program.

B. The operator training requirement in paragraph A above is also applicable to all municipal waste combustors effective June 25, 1999.

C. An incinerator operator training program should include but not be limited to:

1. A summary of the applicable standards under this standard;

2. A description of basic combustion theory applicable to an incinerator;

3. Procedures for receiving, handling, and feeding waste as appropriate;

4. Incinerator startup, shutdown, and malfunction procedures;

5. Procedures for maintaining proper combustion air supply levels;

6. Procedures for operating the incinerator within the standards established under this standard;

7. Procedures for responding to periodic upset or off-specification conditions;

8. Procedures for minimizing particulate matter carryover;

9. Procedures for handling ash;

10. Procedures for monitoring incinerator emissions; and

11. Reporting and recordkeeping procedures.

D. The Department may exempt a facility from any or all of the above Operator Training Requirements on a case-by-case basis.

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SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.5
AIR POLLUTION CONTROL STANDARDS

STANDARD NO. 3.1
HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS (HMIWI)

Section I - Applicability and General Requirements.

(a) This standard applies to any device, regardless of type or construction, which combusts hospital/medical/infectious waste.

(b) This standard is not applicable to crematory incinerators.

(c) Beginning September 15, 2000, existing facilities subject to this standard and not listed as an exempt source for 40 Code of Federal Regulations (CFR) 60 Subpart Ec, Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996 (September 15, 1997, 60 FR 48348), shall operate pursuant to a Title V permit issued by the Department.

(d) An owner or operator shall not combust hospital/medical/infectious waste except in a multiple-chamber incinerator with a solid hearth, or in a device found to be equally effective for the purpose of air contaminant control as an approved multiple-chamber incinerator as determined by the Department.

(e) Physical or operational changes to an existing HMIWI unit, for which construction was commenced on or before June 20, 1996, that are made solely for the purpose of complying with this standard are not considered a modification and do not result in an existing HMIWI unit becoming subject to the provisions of 40 CFR 60 Subpart Ec, Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996 (September 15, 1997, 60 FR 48348).

(f) All HMIWI are subject to this standard. Those HMIWI for which construction or reconstruction commenced after June 20, 1996, are also subject to the provisions of 40 CFR 60 Subpart Ec, Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996 (September 15, 1997, 60 FR 48348).

(g) This standard is not applicable to combustors which burn hospital waste and do not burn any medical/infectious waste and are subject to all provisions of 40 CFR 60 Subpart Eb, Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994, or for Which Modification or Reconstruction is Commenced After June 19, 1996; Subpart Cb, Emission Guidelines and Compliance Times for Large Municipal Waste Combustors that are Constructed on or Before September 20, 1994; or Subpart Ea, Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989, and on or Before September 20, 1994.

Section II - Definitions.

Unless stated otherwise, the definitions that appear in this section shall apply only to this standard.

(a) Batch HMIWI - Means a HMIWI that is designed such that neither waste charging nor ash removal can occur during combustion.

(b) Continuous HMIWI - Means a HMIWI that is designed to allow waste charging and ash removal during combustion.

(c) Dry Scrubber - Means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gases in the HMIWI exhaust stream forming a dry powder material.

(d) Fabric Filter or Baghouse - Means an add-on air pollution control system that removes particulate matter and nonvaporous metals emissions by passing flue gas through filter bags.

(e) Facilities Manager - Means the individual in charge of purchasing, maintaining, and operating the HMIWI or the owner's or operator's representative responsible for the management of the HMIWI. Alternative titles may include director of facilities or vice president of support services.

(f) High-Air Phase - Means the stage of the batch operating cycle when the primary chamber reaches and maintains maximum operating temperatures.

(g) Hospital/Medical/Infectious Waste Incinerator Operator or HMIWI Operator - Means any person who operates, controls, or supervises the day-to-day operation of a HMIWI.

(h) Infectious Agent - Means any organism (such as a virus, bacteria or prion) that is capable of being communicated by invasion and multiplication in body tissues and capable of causing disease or adverse health impacts in humans.

(i) Intermittent HMIWI - Means a HMIWI that is designed to allow waste charging, but not ash removal, during combustion.

(j) Large HMIWI - Means:

(1) Except as provided in paragraph (j)(2) below,

(i) A HMIWI whose maximum design waste burning capacity is more than 500 pounds per hour (lbs/hr); or

(ii) A continuous or intermittent HMIWI whose maximum charge rate is more than 500 lbs/hr; or

(iii) A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day (lbs/day).

(2) The following are not large HMIWI:

(i) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 500 lbs/hr; or

(ii) A batch HMIWI whose maximum charge rate is less than or equal to 4,000 lbs/day.

(k) Maximum Charge Rate - Means:

(1) For continuous and intermittent HMIWI, 110 percent of the lowest three-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(2) For batch HMIWI, 110 percent of the lowest daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(l) Maximum Design Waste Burning Capacity - Means:

(1) For intermittent and continuous HMIWI,

$C = P_V$ x 15, 000/8,500

where:

C = HMIWI capacity, lb/hr

P_V = Primary chamber volume, cubic foot (ft^3)

15,000 = Primary chamber heat release rate factor, British thermal unit per cubic foot per hour ($Btu/ft^3/hr$)

8,500 = Standard waste heating value, Btu/lb;

(2) For batch HMIWI,

$C = P_V$ x 4.5/8

where:

C = HMIWI capacity, lb/hr

P_V = Primary chamber volume, ft^3

4.5 = Waste density, lb/ft^3

8 = Typical hours of operation of a batch HMIWI, hours.

(m) Maximum Fabric Filter Inlet Temperature - Means 110 percent of the lowest three-hour average temperature at the inlet to the fabric filter (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the dioxins/furans emission limit.

(n) Maximum Flue Gas Temperature - Means 110 percent of the lowest three-hour average temperature at the outlet from the wet scrubber (taken, at a minimum, once every minute) measured

during the most recent performance test demonstrating compliance with the mercury (Hg) emission limit.

(o) Medium HMIWI - Means:

(1) Except as provided in paragraph (o)(2) below;

(i) A HMIWI whose maximum design waste burning capacity is more than 200 lbs/hr but less than or equal to 500 lbs/hr; or

(ii) A continuous or intermittent HMIWI whose maximum charge rate is more than 200 lbs/hr but less than or equal to 500 lbs/hr; or

(iii) A batch HMIWI whose maximum charge rate is more than 1,600 lbs/day but less than or equal to 4,000 lbs/day.

(2) The following are not medium HMIWI:

(i) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 lbs/hr or more than 500 lbs/hr; or

(ii) A batch HMIWI whose maximum charge rate is more than 4,000 lbs/day or less than or equal to 1,600 lbs/day.

(p) Minimum Dioxins/Furans Sorbent Flow Rate - Means 90 percent of the highest three-hour average dioxins/furans sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the dioxins/furans emission limit.

(q) Minimum Mercury (Hg) Sorbent Flow Rate - Means 90 percent of the highest three-hour average Hg sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit.

(r) Minimum Hydrogen Chloride (HCl) Sorbent Flow Rate - Means 90 percent of the highest three-hour average HCl sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit.

(s) Minimum Horsepower or Amperage - Means 90 percent of the highest three-hour average horsepower or amperage to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the applicable emission limits.

(t) Minimum Pressure Drop Across the Wet Scrubber - Means 90 percent of the highest three-hour average pressure drop across the wet scrubber PM control device (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM emission limit.

(u) Minimum Scrubber Liquor Flow Rate - Means 90 percent of the highest three-hour average liquor flow rate at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(v) Minimum Scrubber Liquor pH - Means 90 percent of the highest three-hour average liquor pH at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the HCl emission limit.

(w) Minimum Secondary Chamber Temperature - Means 90 percent of the highest three-hour average secondary chamber temperature (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, carbon monoxide (CO), or dioxins/furans emission limits.

(x) Modification or Modified HMIWI - Means any change to a HMIWI unit after the effective date of these standards such that:

(1) The cumulative costs of the modifications, over the life of the unit, exceed 50 percent of the original cost of the construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs; or

(2) The change involves a physical change in or change in the method of operation of the unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under Section 129 or Section 111 of the Clean Air Act (Act).

(y) Operating Day - Means a 24-hour period between 12:00 midnight and the following midnight during which any amount of hospital waste or medical/infectious waste is combusted at any time in the HMIWI.

(z) Operation - Means the period during which waste is combusted in the incinerator excluding periods of startup or shutdown.

(aa) Particulate Matter or PM - Means the total particulate matter emitted from a HMIWI as measured by Environmental Protection Agency (EPA) Reference Method 5 or EPA Reference Method 29.

(bb) Primary Chamber - Means the chamber in a HMIWI that receives waste material, in which the waste is ignited, and from which ash is removed.

(cc) Prion - Means a small infectious pathogen containing protein which is resistant to procedures that modify or hydrolyze nucleic acids.

(dd) Secondary Chamber - Means a component of the HMIWI that receives combustion gases from the primary chamber and in which the combustion process is completed.

(ee) Shutdown - Means the period of time after all waste has been combusted in the primary chamber. For continuous HMIWI, shutdown shall commence no less than two hours after the last charge to the incinerator. For intermittent HMIWI, shutdown shall commence no less than four hours after the last charge to the incinerator. For batch HMIWI, shutdown shall commence no less than five hours after the high-air phase of combustion has been completed.

(ff) Small HMIWI - Means:

(1) Except as provided in paragraph (ff)(2) below,

(i) An HMIWI whose maximum design waste burning capacity is less than or equal to 200 lbs/hr; or

(ii) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 lbs/hr; or

(iii) A batch HMIWI whose maximum charge rate is less than or equal to 1,600 lbs/day.

(2) The following are not small HMIWI:

(i) A continuous or intermittent HMIWI whose maximum charge rate is more than 200 lbs/hr;

(ii) A batch HMIWI whose maximum charge rate is more than 1,600 lbs/day.

(gg) Standard Conditions - Means a temperature of 20 degrees Celsius (C) and a pressure of 101.3 kilopascals.

(hh) Startup - Means the period of time between the activation of the system and the first charge to the unit. For batch HMIWI, startup is the period of time between activation of the system and ignition of the waste.

(ii) Wet Scrubber - Means an add-on air pollution control device that utilizes an alkaline scrubbing liquor to collect PM (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

Section III - Emission Limitations.

(a) On and after the date on which the initial performance test is completed or is required to be completed as per Section VII of this standard, whichever date comes first, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain stack emissions in excess of the limits presented in Table I below.

Table I

Emission Limitations for Small, Medium, and Large
Hospital/Medical/Infectious Waste Incinerators

Pollutant	Units (7 percent oxygen (O_2) basis, dry basis)	Small	Medium	Large
PM	Milligrams per dry standard cubic meter (gr/dscf)	115 (0.05)	69 (0.03)	34 (0.015)
CO	ppmv	40	40	40
Dioxins/Furans	Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)
HCl	ppmv or percent reduction	100 or 93 percent	100 or 93 percent	100 or 93 percent
Sulfur Dioxide (SO_2)	ppmv	55	55	55

Pollutant	Units (7 percent oxygen (O_2) basis, dry basis)	Small	Medium	Large
Nitrogen Oxide (NOx)	ppmv	250	250	250
Lead (Pb)	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	1.2 (0.52) or 70 percent	1.2 (0.52) or 70 percent	1.2 (0.52) or 70 percent
Cadmium (Cd)	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	0.16 (0.07) or 65 percent	0.16 (0.07) or 65 percent	0.16 (0.07) or 65 percent
Hg	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	0.55 (0.24) or 85 percent	0.55 (0.24) or 85 percent	0.55 (0.24) or 85 percent

gr/dscf = grains per dry standard cubic foot
ppmv = parts per million by volume
TEQ = Toxic Equivalents Quantity

(b) No owner or operator of an affected facility shall cause to be discharged into the atmosphere from the stack of that affected facility any gases that exhibit greater than 10 percent opacity (six-minute rolling average) or equal to or greater than 30 percent at any time.

(c) No small HMIWI which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (defined in 40 CFR 60.31e, September 15, 1997, 60 FR 48348), and which burns less than 2,000 pounds per week of hospital waste and medical/infectious waste shall cause to be discharged into the atmosphere from that affected facility any gases that contain stack emissions in excess of the limits presented in Table II below. The 2,000 lbs/week limitation does not apply during performance tests.

Table II

Emission Limitations for Small Rural
Hospital/Medical/Infectious Waste Incinerators

Pollutant	Units (7 percent O_2 basis, dry basis)	Small (Rural)
PM	Milligrams per dry standard cubic meter (gr/dscf)	197 (0.086)
CO	ppmv	40
Dioxins/Furans	Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet)	800 (350) or 15 (6.6)
HCl	ppmv	3100
SO_2	ppmv	55

Pollutant	Units (7 percent O_2 basis, dry basis)	Small (Rural)
NO_X	ppmv	250
Pb	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	10 (4.4)
Cd	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	4 (1.7)
Hg	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	7.5 (3.3)
Opacity	6 minute average	10 percent

gr/dscf = grains per dry standard cubic foot
ppmv = parts per million by volume
TEQ = Toxic Equivalents Quantity

(d) Large HMIWI with capacity greater than 2,000 lbs/hr for continuous and 16,000 lbs/day for batch shall complete an ambient impact analysis for: arsenic and compounds expressed as arsenic; beryllium and compounds expressed as beryllium; hexavalent chromium and compounds expressed as chromium; and nickel and compounds expressed as nickel.

(1) Using available emission factors, the emissions from the facility shall be estimated and the analysis shall be conducted by performing dispersion modeling using the facility's exhaust characteristics. The analysis shall be conducted in accordance with the procedures stipulated in the Air Quality Modeling Guidelines.

(2) The required analysis must show that predicted concentrations do not exceed the following applicable annual ambient concentrations.

Table III

Allowable Ambient Concentrations

Pollutant	Units	Allowable Ambient Concentration
Arsenic (As)	$\mu g/m^3$	2.3e-04
Beryllium (Be)	$\mu g/m^3$	4.2e-04
Hexavalent Chromium (Cr (+6))	$\mu g/m^3$	8.3e-05
Nickel (Ni)	$\mu g/m^3$	3.3e-03

$\mu g/m^3$ = micrograms per cubic meter

(3) Compliance shall be verified by stack sampling as described in Section VII of this standard. Using the actual stack parameters and emission rates from the most recent source test and Department approved modeling techniques, the calculated maximum annual ambient concentrations shall not exceed the above levels. The modeling methodology shall be submitted with the source test plans required by Regulation 61-62.1, Section IV, Source Tests. The applicant shall submit a Modeling Protocol to the Department and receive approval prior to starting any modeling study.

(e) Large HMIWI with capacity greater than 2,000 lbs/hr for continuous and 16,000 lbs/day for batch shall maintain a combustion efficiency of 99.9 percent or greater on an hourly basis. The combustion efficiency shall be calculated as follows:

$$C.E. = \frac{[CO_2]}{[CO_2]+[CO]} \times 100$$

C.E. = Combustion efficiency
$[CO_2]$ = Concentration of carbon dioxide (ppmv corrected to 7 percent O_2)
[CO] = Concentration of carbon monoxide (ppmv corrected to 7 percent O_2)

Note: O_2, CO_2, and CO determined on a dry basis.

(f) Upon mutual agreement of an owner or operator of a HMIWI and the Department, an emission limit more restrictive than that otherwise specified in this standard and/or an emission limit for any air contaminant discharged from the HMIWI that is not specified in this standard may be established. Also, upon mutual agreement of the owner or operator of an affected source and the Department, operating hours, process flow rates, or any other operating parameter may be established as a binding limit for the affected source. Any items mutually agreed to shall be stated as a special condition for any permit or order concerning the source. Violation of this mutual agreement will be considered a violation and will be subject to appropriate enforcement.

Section IV - Performance Specifications.

(a) The owner or operator of an affected facility shall ensure that:

(1) The secondary chamber is maintained at a temperature equal to or greater than 1800 degrees Fahrenheit (F). A thermocouple is appropriately located at the exit of the chamber to confirm the temperature.

(2) The temperature equal to or greater than 1800 degrees F is maintained for at least one second (secondary chamber residence time). The ducting between the secondary chamber and heat recovery system or the breaching and portion of the stack (tertiary chamber) may not be included for the residence time demonstration.

(3) The auxiliary (secondary and/or tertiary) burners of the incinerator are designed such that without the assistance of the heat content of the waste, a minimum temperature of 2000 degrees F can be maintained for at least one second. (See Appendix B)

(4) Appendix B of this standard shall be used to demonstrate compliance with paragraphs (a)(2) and (3) above.

(b) Owners or operators which have an incinerator facility with a continuous capacity greater than 2000 lbs/hr or a batch capacity of less than 16,000 lbs/day in existence on or before May 25, 1990, equipped with a secondary chamber and/or an afterburner operated at a minimum temperature equal to or greater than 1800 degrees F may choose to meet a more restrictive visible emission standard of zero percent opacity in lieu of meeting the residence time requirements in paragraph (a) above. However, a residence time of at least 0.5 seconds will be required if the facility is permitted to burn hazardous waste or antineoplastic drugs.

(c) The firing of the burners and the combustion air shall be modulated automatically to maintain a secondary chamber exit or after burner temperature of at least 1800 degrees F.

(d) The incinerator shall be equipped with an automatic loader except for units with capacities less than or equal to 300 lbs/hr and equipped with the interlocks specified in paragraphs (e) or (g) below or as provided in paragraph (f) below. However, a sealed feeding device capable of preventing combustion upsets during charging will be required for the units with capacity less than 300 lbs/hr.

(e) For batch fed incinerators (fully loaded while cold and never opened until burn cycle is completed), interlocks should be provided to prevent (1) ignition of the waste until the secondary chamber exit or afterburner temperature is established at equal to or greater than 1800 degrees F; and (2) recharging until the combustion cycle is complete. No waste shall be incinerated if the required interlock system is not operational.

(f) The owner or operator of an incinerator, except a batch incinerator in existence on or before May 25, 1990, which is manually fed may submit a written request to the Department that manual feeding be allowed. The request must include a plan detailing the methods and operating procedure to be employed in manually charging the incinerator. The Department shall determine if the plan provided is acceptable.

(1) The owner or operator of the incinerator must post or file on the operating premises a copy of the approved plan.

(2) The plan shall not relieve the owner or operator of the duty of meeting all other emission requirements.

(3) Any violation of the conditions under which the plan was approved or any violation of other requirements of this standard may result in the Department requiring that an automatic mechanical loading device be installed.

(g) For non-batch fed incinerators, the charging of waste to the incinerator shall automatically cease through the use of an interlock system when any of the following conditions exist: [Note: The only monitors required in the interlock system are those required for a specific incinerator size facility in Section V below.]

(1) The incinerator's secondary chamber exit or afterburner temperature drops below 1800 degrees F; and/or

(2) The carbon monoxide emissions are equal to or greater than 150 ppmv (dry basis), corrected to seven percent O_2 on a dry basis for a 15 minute period; and/or

(3) The flue gas O_2 level drops below six percent (dry basis) for a 15 minute period; and/or

(4) The opacity of the visible emissions is equal to or greater than 10 percent for a period of 15 minutes; and/or

(5) The required monitoring equipment is not functioning.

(h) Startup and Shutdown Requirements

(1) The owner or operator of an affected facility shall ensure that:

(i) No waste is charged to an incinerator other than a batch incinerator until the secondary chamber or afterburner has achieved a minimum temperature of 1800 degrees F.

(ii) The secondary chamber or afterburner has achieved and maintained the required minimum temperature for 15 minutes before charging begins.

(iii) The control equipment (if equipped) is operational and functioning properly, prior to the ignition of waste and until all the waste is incinerated.

(2) The owner or operator of an affected facility shall ensure that during shutdowns the secondary chamber or afterburner minimum temperature of 1800 degrees F is to be maintained using auxiliary burners until "shutdown" as defined in Section II of this standard has been met.

(3) The owner or operator of an affected facility shall ensure that a detailed procedure for normal system startup and shutdown, including the duration of preheat and burnout cycles, is submitted as part of the application for approval.

(i) Storage.

(1) The owner or operator of an affected facility shall ensure that the storage of hospital/medical/infectious waste shall be in a manner approved by the Department to prevent the escape of malodor.

(2) The owner or operator of an affected facility shall ensure that hospital/medical/infectious waste and ash are stored only in enclosed, leaktight containers or areas.

(3) The owner or operator of an affected facility shall ensure that ash is loaded in an enclosed area or handled wet in enclosed containers.

Section V - Monitoring Requirements.

(a) General.

(1) The owner or operator of an affected facility shall ensure that all monitoring devices are maintained in accordance with Section VI of this standard.

(2) The owner or operator of an affected facility shall ensure that all data recorder resolutions are sufficient to display the data recording frequencies required in Table IV, and Section V(d) of this standard.

(b) Small (Rural) HMIWI facilities.

(1) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum, once every minute throughout operation.

(2) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a device which automatically measures and records the date, time, and weight of each charge fed into the HMIWI.

(3) The owner or operator of an affected facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating hours per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste.

(c) Small (Urban), Medium, and Large HMIWI facilities

(1) The owner or operator of an affected facility shall install, calibrate, maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table IV of this standard such that these devices (or methods) measure and record values for these operating parameters at the frequencies indicated in Table IV of this standard at all times except during periods of startup and shutdown.

(2) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration.

(3) The owner or operator of an affected facility using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under this standard shall install, calibrate, maintain, and operate the equipment necessary to monitor the site-specific operating parameters developed pursuant to Section VII (c)(8) of this standard.

(4) The owner or operator of an affected facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste.

(5) The owner or operator of an affected facility shall ensure that:

(i) The secondary chamber or afterburner temperatures are continuously monitored and recorded.

(ii) Sensors are installed, maintained, and operated such that the flames from the burners do not impinge upon the sensors.

(iii) The secondary chamber temperature is measured at or beyond the chamber exit.

(6) The Department reserves the right to require the owner/operator to provide telemetering of continuous monitoring data to the Department.

(d) Large HMIWI facilities with capacity equal to or greater than 2,000 lbs/hr

The owner or operator of an affected facility shall ensure that:

(1) Continuous monitors are installed on each HMIWI emission stack for O_2, CO, CO_2, and opacity.

(2) The O_2, CO, and CO_2 monitors are co-located upstream of any air pollution control devices unless otherwise approved by the Department.

(3) Each O_2 monitor takes at a minimum of one measurement every 60 seconds and that this data is recorded at least every successive five minutes.

(4) Each CO monitor takes a minimum of one measurement every 60 seconds and that this data recorded at least every successive five minutes.

(5) Each CO_2 monitor takes a minimum of one measurement every 60 seconds and that this data recorded at least every successive five minutes.

(6) Each opacity monitor completes a minimum of one cycle of sampling and analysis for each 10 second period and one cycle of data recording for each successive six-minute period.

Table IV

Operating Parameters to be Monitored and
Minimum Measurement and Recording Frequencies

Operating parameters to be monitored	Minimum frequency		Control system		
	Data measurement	Data recording	Dry scrubber followed by fabric filter	Wet scrubber	Dry scrubber followed by fabric filter and wet scrubber
Maximum operating parameters:					
Max. charge rate	Continuous	1 time/hour	X	X	X
Max. fabric filter inlet temperature	Continuous	1 time/minute	X	.....	X
Max. flue gas temperature	Continuous	1 time/minute	X	X	X
Minimum operating parameters:					
Min. secondary chamber temperature	Continuous	1 time/minute	X	X	X
Min. dioxins/furans sorbent flow rate	Hourly	1 time/hour	X	.....	X
Min. HCl sorbent flow rate	Hourly	1 time/hour	X	.....	X
Min. mercury (Hg) sorbent flow rate	Hourly	1 time/hour	X	.....	X
Min. pressure drop across the wet scrubber or	Continuous	1 time/minute	.....	X	X

min. horsepower or amperage to wet scrubber					
Min. scrubber liquor flow rate	Continuous	1 time/minute	.....	X	X
Min. scrubber liquor pH	Continuous	1 time/minute	.....	X	X

X = applicable

Section VI - Calibration and Quality Assurance of Monitoring Devices.

(a) Provisions of this section, or other procedures approved by the Department, are applicable to monitoring devices which are required under Section V of this standard or which are required by permit conditions to establish compliance with Regulation 61-62.5, Standard No. 3.1. The daily zero and span calibration for all categories of continuous emission monitors shall comply with the requirements of 40 CFR 60.13(d)(1) and (d)(2), July 1, 1988.

(b) The owner or operator of an affected facility shall ensure that any monitoring devices required by this standard, but not included in this section, conform to the manufacturers specifications for initial calibration and quality assurance unless otherwise stated in regulation or permit requirements. Likewise, those monitors specifically mentioned may be subject to other, more stringent, regulatory and permit requirements.

(c) The owner or operator of an affected facility shall ensure that CO, CO_2, O_2, and opacity monitors are recalibrated annually in accordance with paragraph (b) above. Opacity monitors must be audited with low, medium, and high neutral density filters that are National Institute of Science and Technology (NIST) traceable.

Section VII - Testing Requirements.

(a) General

(1) The owner or operator of an affected HMIWI facility constructed on or before June 20, 1996, shall ensure that an initial source test is conducted no later than 12 months following the effective date of this standard.

(2) For incinerator facilities where construction commenced after June 20, 1996, or modification began after March 16, 1998, the owner or operator shall ensure that an initial source test is conducted within 60 days after achieving the maximum production rate at which the incinerator will be operated, but no later than 180 days after initial startup.

(3) The owner or operator of an affected facility shall ensure that source testing is conducted in the manner prescribed in Section 60.37e of Subpart Ce (40 CFR 60) and in accordance with Regulation 61-62.1 Section IV, Source Tests. The use of the bypass stack during a performance test shall invalidate the performance test.

(4) The Department may require air contaminant source testing as determined to be necessary to assure continuous compliance with the requirements of this standard and any emission limit stipulated as a permit condition.

(5) The emission limits under this standard apply at all times except during periods of startup, shutdown, or malfunction, provided that no hospital waste or medical/infectious waste is charged

to the affected facility during startup, shutdown, or malfunction.

(b) Existing Sources

(1) Small (Rural) HMIWI facilities.

(i) The owner or operator of an affected facility shall ensure that an initial source test is conducted for the following:

(A) Particulate matter;

(B) CO;

(C) Hg;

(D) Dioxins/furans; and

(E) Opacity.

(ii) The Department reserves the right to require the owner or operator to conduct further source tests at any time if it is determined to be necessary by the Department after the initial compliance test. In addition to paragraph (b)(1)(i) above, these tests may include:

(A) HCl;

(B) Arsenic and compounds expressed as arsenic;

(C) Beryllium and compounds expressed as beryllium;

(D) Cadmium and compounds expressed as cadmium;

(E) Hexavalent chromium and compounds expressed as chromium;

(F) Lead and compounds expressed as lead; and

(G) Nickel and compounds expressed as nickel.

(iii) The owner or operator of an affected facility shall establish maximum charge rate and minimum secondary chamber temperature as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limits.

(iv) Following the date on which the initial performance test is completed or is required to be completed under this standard, whichever date comes first, the owner or operator of an affected facility shall ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three-hour rolling averages (calculated each hour as the average of the previous three operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation of the established operating parameter(s).

(v) Except as provided in paragraph (b)(1)(vi) below, operation of

the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxins/furans emission limits.

(vi) The owner or operator of an affected facility may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission limit(s). The owner or operator of an affected facility shall ensure that repeat performance tests are conducted pursuant to this paragraph using the identical operating parameters that indicated a violation under paragraph (b)(1)(v) above.

(vii) The owner or operator of an affected facility shall demonstrate compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods.

(2) Small (Urban) HMIWI facilities

(i) The owner or operator of an affected facility shall ensure that an initial source test is conducted for the following:

(A) Particulate matter;

(B) HCl;

(C) CO;

(D) Cadmium;

(E) Lead;

(F) Hg;

(G) Dioxins/furans; and

(H) Opacity.

(ii) The Department reserves the right to require the owner or operator to conduct further source tests at any time if it is determined to be necessary by the Department after the initial compliance test. In addition to paragraph (b)(2)(i) above, these tests may include:

(A) Arsenic and compounds expressed as arsenic;

(B) Beryllium and compounds expressed as beryllium;

(C) Hexavalent chromium and compounds expressed as chromium; and

(D) Nickel and compounds expressed as nickel.

(iii) Following the date on which the initial performance test is completed or is required to be completed, whichever date comes first, the owner or operator of an affected facility shall:

(A) Demonstrate compliance with the opacity limit by

conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods.

(B) Demonstrate compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods in accordance with paragraph (a)(3) of this section. If all three performance tests over a three-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

(3) Medium HMIWI facilities

(i) The owner or operator of an affected facility shall ensure that an initial source test is conducted for the following:

(A) Particulate matter;

(B) HCl;

(C) CO;

(D) Cadmium;

(E) Lead;

(F) Hg;

(G) Dioxins/furans; and

(H) Opacity.

(ii) The Department reserves the right to require the owner or operator to conduct further source tests at any time if it is determined to be necessary by the Department after the initial compliance test. In addition to paragraph (b)(3)(i) above, these tests may include:

(A) Arsenic and compounds expressed as arsenic;

(B) Beryllium and compounds expressed as beryllium;

(C) Hexavalent chromium and compounds expressed as chromium; and

(D) Nickel and compounds expressed as nickel.

(iii) Following the date on which the initial performance test is completed or is required to be completed, whichever date comes first, the owner or operator of an affected facility shall:

(A) Demonstrate compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods.

(B) Demonstrate compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods in accordance with paragraph (a)(3) of this section. If all three performance tests over a three-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

(4) Large HMIWI facilities with capacity < 2000 lbs/hr

(i) The owner or operator of an affected facility shall ensure that an initial source test is conducted for the following:

(A) Particulate matter;

(B) HCl;

(C) CO;

(D) Cadmium;

(E) Lead;

(F) Hg;

(G) Dioxins/furans; and

(H) Opacity.

(ii) The Department reserves the right to require the owner or operator to conduct further source tests at any time if it is determined to be necessary by the Department after the initial compliance test. In addition to paragraph (b)(4)(i) above, these tests may include:

(A) Arsenic and compounds expressed as arsenic;

(B) Beryllium and compounds expressed as beryllium;

(C) Hexavalent chromium and compounds expressed as

chromium; and

(D) Nickel and compounds expressed as nickel.

(iii) Following the date on which the initial performance test is completed or is required to be completed, whichever date comes first, the owner or operator of an affected facility shall:

(A) Demonstrate compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods.

(B) Demonstrate compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods in accordance with paragraph (a)(3) of this section. If all three performance tests over a three-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

(5) Large HMIWI facilities with capacity equal to or greater than 2000 lbs/hr

(i) The owner or operator of an affected facility shall ensure that an initial source test is conducted for the following:

(A) Particulate matter;

(B) HCl;

(C) CO;

(D) Cadmium;

(E) Lead;

(F) Hg;

(G) Dioxins/furans; and

(H) Opacity.

(ii) The Department reserves the right to require the owner or operator to conduct further source tests at any time if it is determined to be necessary by the Department after the initial compliance test. In addition to paragraph (b)(5)(i) above, these tests may include:

(A) Arsenic and compounds expressed as arsenic;

(B) Beryllium and compounds expressed as beryllium;

(C) Hexavalent chromium and compounds expressed as chromium;

(D) Nickel and compounds expressed as nickel; and

(E) SO_2.

(iii) Following the date on which the initial performance test is completed or is required to be completed, whichever date comes first, the owner or operator of an affected facility shall:

(A) Demonstrate compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods.

(B) Demonstrate compliance with the PM, CO, HCl, and dioxins/furans emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods in accordance with paragraph (a)(3) of this section. If all four performance tests over a three-year period indicate compliance with the emission limit for a pollutant (PM, CO, HCl, or dioxins/furans), the owner or operator may forego a performance test for that pollutant for the subsequent two years. At a minimum, a performance test for PM, CO, HCl, and dioxins/furans shall be conducted every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, HCl, or dioxins/furans), the owner or operator may forego a performance test for that pollutant for an additional two years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

(c) Additional Testing Requirements for New, Existing, and Modified Sources

(1) An owner or operator of a facility using a Continuous Emission Monitoring System (CEMS) to demonstrate compliance with any of the emission limits under Section III of this standard shall:

(i) Determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours (not including startup, shutdown, or malfunction).

(ii) Operate all CEMS in accordance with the applicable procedures under Section V of this standard and 40 CFR 60, Appendices B and F.

(2) The owner of an affected facility shall demonstrate to the Department and maintain a combustible carbon content not to exceed six percent (dry basis) in the ash residue (ash and non-combustibles). Such a demonstration shall use the test method outlined in ASTM Method D 3178 “Carbon & Hydrogen Analysis of Coal and Coke,” ASTM Method D 5373, or other methods approved by this Department and be performed at least once per year. The Department reserves the right to require more frequent demonstrations when it is determined to be necessary. The Department also reserves the

right to alter the frequency of the required demonstrations as a data base is established and the ash quality consistently shows compliance for a specific facility.

(3) The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall:

(i) Establish the appropriate maximum and minimum operating parameters, indicated in Table IV of this standard for each control system, as site specific operating parameters during the initial performance test to determine compliance with the emission limits; and

(ii) Following the date on which the initial performance test is completed or is required to be completed under this standard, whichever date comes first, the owner or operator shall ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table IV of this standard and measured as three-hour rolling averages (calculated each hour as the average of the previous three operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).

(4) Except as provided in paragraph (c)(7) of this section, for affected facilities equipped with a dry scrubber followed by a fabric filter:

(i) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(ii) Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxins/furans sorbent flow rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the dioxins/furans emission limit.

(iii) Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(iv) Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(v) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxins/furans, HCl, Pb, Cd and Hg emission limits.

(5) Except as provided in paragraph (c)(7) of this section, for affected facilities equipped with a wet scrubber:

(i) Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the PM emission limit.

(ii) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(iii) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum scrubber liquor flow rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the dioxins/furans emission limit.

(iv) Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(v) Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(vi) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxins/furans, HCl, Pb, Cd and Hg emission limits.

(6) Except as provided in paragraph (c)(7) of this section, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber:

(i) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(ii) Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxins/furans sorbent flow rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the dioxins/furans emission limit.

(iii) Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(iv) Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(v) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxins/furans, HCl, Pb, Cd and Hg emission limits.

(7) The owner or operator of an affected facility may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraph (c)(4), (c)(5), or (c)(6) of this section.

(8) The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter

and a wet scrubber to comply with the emission limits under this standard shall contact the EPA in writing for approval of other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the request has been approved by the EPA.

(9) The owner or operator of an affected facility may conduct a repeat performance test at any time, in accordance with the requirements of Regulation 61-62.1, Section IV, Source Test, to establish new values for the operating parameters. The Department may request a repeat performance test at any time.

Section VIII - Recordkeeping and Reporting Requirements.

(a) The owner or operator of an affected facility shall ensure that:

(1) Inspection and maintenance schedules for incinerators are posted or kept on-site at or near the incinerator.

(2) Operating procedures, startup procedures, and shutdown procedures for incinerators are approved by the Department and posted on-site at or near the incinerator.

(b) In addition to an inspection and maintenance plan, the owner or operator shall prepare a plan of action for approval by the Department. The plan of action shall identify the steps and procedures the operator will follow to avoid exceedances of the emission limitations and operating conditions specified in this standard or specific permit conditions. The plan shall include descriptions of startup and shutdown procedures; actions to be taken to correct anomalous operating conditions and training of plant operators.

(c) The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least five years:

(1) Calendar date of each record;

(2) Records of the following data:

(i) Concentrations of any pollutant listed in this standard or measurements of opacity as determined by the continuous emission monitoring system (if applicable);

(ii) HMIWI charge dates, times, and weights and hourly charge rates;

(iii) Fabric filter inlet temperatures during each minute of operation, as applicable;

(iv) Amount and type of dioxins/furans sorbent used during each hour of operation, as applicable;

(v) Amount and type of Hg sorbent used during each hour of operation, as applicable;

(vi) Amount and type of HCl sorbent used during each hour of operation, as applicable;

(vii) Secondary chamber temperatures recorded during each minute of operation;

(viii) Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;

(ix) Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;

(x) Pressure drop across the wet scrubber system during each minute of operation, as applicable;

(xi) Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;

(xii) pH at the inlet to the wet scrubber during each minute of operation, as applicable;

(xiii) Records indicating use of the bypass stack, including dates, times, and durations; and

(xiv) For affected facilities complying with Section VII(c)(8) and Section V(c)(3) of this standard, the owner or operator shall maintain all operating parameter data collected.

(3) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (c)(2) of this section have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

(4) Identification of calendar days, times and durations of malfunctions, a description of the malfunction and the corrective action taken.

(5) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (c)(2) of this section exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

(7) Records showing the names of HMIWI operators who have completed review of the information in Section IX(h) as required by Section IX(g) of this standard, including the date of the initial review and all subsequent annual reviews.

(8) Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training.

(9) Records showing the names of the HMIWI operators who have met the criteria for qualification under Section IX of this standard and the dates of their qualification.

(10) Records of calibration of any monitoring devices as required under Sections V(b), (c), and (d) of this standard.

(d) The owner or operator of an affected facility shall submit the information specified in paragraphs (d)(1) through (d)(3) of this section no later than 30 days following the initial performance test. All reports shall be signed by the facilities manager.

(1) The initial performance test data as recorded under Section VII of this standard, as applicable.

(2) The values for the site-specific operating parameters established pursuant to Section VII of this standard, as applicable.

(3) The waste management plan as specified in Section X of this standard.

(e) The owner or operator of an affected facility shall ensure that an annual report is submitted one year following the submission of the information in paragraph (d) of this section. Subsequent reports shall be submitted no more than 12 months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semi-annually). The annual report shall include the information specified in paragraphs (e)(1) through (e)(8) of this section. All reports shall be signed by the facilities manager.

(1) The values for the site-specific operating parameters established pursuant to Section VII of this standard, as applicable.

(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to Section VII of this standard, as applicable.

(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to Section VII of this standard for the calendar year preceding the year being reported, in order to provide the Department with a summary of the performance of the affected facility over a two-year period.

(4) Any information recorded under paragraphs (c)(3) through (c)(5) of this section for the calendar year being reported.

(5) Any information recorded under paragraphs (c)(3) through (c)(5) of this section for the calendar year preceding the year being reported, in order to provide the Department with a summary of the performance of the affected facility over a two-year period.

(6) If a performance test was conducted during the reporting period, the results of that test.

(7) If no exceedances or malfunctions were reported under paragraphs (c)(3) through (c)(5) of this section for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

(f) The owner or operator of an affected facility shall submit semi-annual reports containing any information recorded under paragraphs (c)(3) through (c)(5) of this section no later than 60 days following the reporting period. The first semi-annual reporting period ends six months following the submission of information in paragraph (d) of this section. Subsequent reports shall be submitted no later

than six-calendar months following the previous report. All reports shall be signed by the facilities manager.

(g) All records specified under paragraph (c) of this section shall be maintained on-site in either paper copy or computer-readable format, unless an alternative format is approved by the Department.

(h) The owner or operator of each small rural HMIWI subject to the emission limits in Table II of this standard shall:

(1) Maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within 10 days of an inspection or the time frame established by the Department; and

(2) Submit an annual report containing information recorded under paragraph (h)(1) of this section no later than 60 days following the year in which data were collected. Subsequent reports shall be sent no later than 12 calendar months following the previous report (once the unit is subject to permitting requirements under Title V of the Act, the owner or operator must submit these reports semi-annually). The report shall be signed by the facilities manager.

(i) The owner or operator of an affected facility shall ensure that copies of all records and reports required under this section are available for inspection during normal working hours and copies are furnished within 10-working days after receipt of a written request from the Department.

(j) The owner or operator of an affected facility subject to the monitoring provisions of this standard will be required to report quarterly all exceedances of limits specified in the source's operating permit. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter.

(k) The owner or operator of an affected facility shall ensure the appropriate Regional Environmental Quality Control Office is notified by telephone immediately following any failure of process equipment, failure of any air pollution control equipment, failure of any monitoring equipment, or a process operational error which results in an increase in emissions above any allowable emission rate. In addition, the owner or operator of an affected facility shall ensure that the Department is notified in writing of the problem and measures taken to correct the problem as expeditiously as possible in accordance with South Carolina Air Pollution Control Regulation 61-62.1, Section II.J.1.c.

Section IX - Operator Training and Qualification Requirements.

(a) No owner or operator of an affected facility shall allow the affected facility to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within one hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.

(b) The owner or operator of an affected facility shall ensure that operator training and qualification is obtained through a program approved by the Department and which shall include the requirements contained in paragraphs (c) through (g) of this section.

(c) Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

(1) 24 hours of training on the following subjects:

(i) Environmental concerns, including pathogen destruction and types of emissions;

(ii) Basic combustion principles, including products of combustion;

(iii) Operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

(iv) Combustion controls and monitoring;

(v) Operation of air pollution control equipment and factors affecting performance (if applicable);

(vi) Methods to monitor pollutants (continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters) and equipment calibration procedures (where applicable);

(vii) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;

(viii) Actions to correct malfunctions or conditions that may lead to malfunction;

(ix) Bottom and fly ash characteristics and handling procedures;

(x) Applicable federal, state, and local regulations;

(xi) Work safety procedures;

(xii) Pre-startup inspections; and

(xiii) Recordkeeping requirements.

(2) An examination designed and administered by the instructor.

(3) Reference material distributed to the attendees covering the course topics.

(d) Qualification shall be obtained by:

(1) Completion of a training course that satisfies the criteria under paragraph (c) of this section; and

(2) Either six months experience as an HMIWI operator, six months experience as a direct supervisor of an HMIWI operator, or completion of at least two burn cycles under the observation of two qualified HMIWI operators.

(e) Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.

(f) To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least four hours covering, at a minimum, the following:

(1) Update of regulations;

(2) Incinerator operation, including startup and shutdown procedures;

(3) Inspection and maintenance;

(4) Responses to malfunctions or conditions that may lead to malfunction; and

(5) Discussion of operating problems encountered by attendees.

(g) A lapsed qualification shall be renewed by one of the following methods:

(1) For a lapse of less than three years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (f) of this section.

(2) For a lapse of three years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (c) of this section.

(h) The owner or operator of an affected facility shall maintain documentation at the facility that addresses the following:

(1) Summary of the applicable requirements under this standard;

(2) Description of basic combustion theory applicable to an HMIWI;

(3) Procedures for receiving, handling, and charging waste;

(4) HMIWI startup, shutdown, and malfunction procedures;

(5) Procedures for maintaining proper combustion air supply levels;

(6) Procedures for operating the HMIWI and associated air pollution control systems within the requirements established under this standard;

(7) Procedures for responding to periodic malfunction or conditions that may lead to malfunction;

(8) Procedures for monitoring HMIWI emissions;

(9) Reporting and recordkeeping procedures; and

(10) Procedures for handling ash.

(i) The owner or operator of an affected facility shall establish a program for reviewing the information listed in paragraph (h) of this section annually with each HMIWI operator.

(1) The initial review of the information listed in paragraph (h) of this section shall be conducted within six months after the effective date of this subpart or prior to assumption of responsibilities affecting HMIWI operation, whichever date is later.

(2) Subsequent reviews of the information listed in paragraph (h) of this section shall be conducted annually.

(j) The information listed in paragraph (h) of this section shall be kept in a readily accessible location for all HMIWI operators. This information, along with records of training shall be available for inspection by the Department.

Section X - Waste Management Plan.

The owner or operator of an affected facility shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as paper, cardboard, plastics, glass, battery, or metal recycling; or purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have. The American Hospital Association publication entitled "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities" (incorporated by reference, see 40 CFR 60.17, September 15, 1997), shall be considered in the development of the waste management plan.

Section XI - Inspection Guidelines.

(a) The owner or operator of an affected facility shall ensure that the HMIWI has an initial equipment inspection performed within one year of the effective date of this standard. The inspection shall not relieve the owner or operator from any detected violations.

(1) At a minimum, an inspection shall include the following:

(i) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation; clean pilot flame sensor, as necessary;

(ii) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

(iii) Inspect hinges and door latches and lubricate as necessary;

(iv) Inspect dampers, fans, and blowers for proper operation;

(v) Inspect HMIWI door and door gaskets for proper sealing;

(vi) Inspect motors for proper operation;

(vii) Inspect primary chamber refractory lining; clean and repair/replace lining as necessary;

(viii) Inspect incinerator shell for corrosion and/or hot spots;

(ix) Inspect secondary/tertiary chamber and stack, clean as necessary;

(x) Inspect mechanical loader, including limit switches, for proper operation, if applicable;

(xi) Visually inspect waste bed (grates), and repair/seal, as appropriate;

(xii) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

(xiii) Inspect air pollution control device(s) for proper operation, if applicable;

(xiv) Inspect waste heat boiler systems to ensure proper operation, if applicable;

(xv) Inspect bypass stack components;

(xvi) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and

(xvii) Generally observe that the equipment is maintained in good operating condition.

(2) Within 10-operating days following an equipment inspection, the owner or operator of an affected facility shall ensure that all necessary repairs shall be completed. In order to exceed the 10 days, the owner or operator must justify the extension and obtain written approval from the Department establishing a date whereby all necessary repairs of the designated facility shall be completed.

(b) The owner or operator of an affected facility shall ensure that the HMIWI has an equipment inspection performed annually (no more than 12 months following the previous annual equipment inspection), as outlined in paragraphs (a)(1) and (a)(2) of this section.

Appendix A

Toxic Equivalency Factors

Dioxins/Furans Congener	Toxic Equivalency Factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1

1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
Octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
Octachlorinated dibenzofuran	0.001

Appendix B

Residence Time Calculation Guidance

The review of all incinerators shall include verification of the residence time stated on the application. This guidance shall be followed to assure that these calculations are handled in a uniform manner.

STEP 1. Estimate the total heat input to the system:

Total system heat input (Btu/hr) = [Maximum waste firing rate (lbs/hr) x Maximum heating value (Btu/lb)] + Average primary burner heat input + Average secondary burner input.

NOTE: Use the average burner inputs required after the onset of waste burning.

Use a waste heating value of 8,500 Btu/lb.

STEP 2. Estimate the system heat loss (prior to heat recovery):

System heat loss = Shell loss + Sensible heat in ash + Sensible heat in unburned carbon + Latent heat.

The heat loss may be assumed to be 20 percent of total heat input.

STEP 3. Calculate the net heat available (Q) to raise the temperature of the products of combustion:

Q (Btu/hr) = (Total system heat input) - (System heat loss).

STEP 4. Calculate the weight of product of combustion (M):

$M = Q/ \{C_p \times (T_o - T_i)\}$

C_p = Average specific heat (Btu/lb degrees F), assume a value of 0.28.

T_o = Exit temperature (degrees F), use the design temperature of 2000 degrees F as T_o.

T_i = Ambient air temperature (degrees F), assume the ambient temperature to be 70 degrees F.

STEP 5. Calculate the volume of product of combustion (F):

$$F\ (scfs) = \frac{M}{d \times 60 \times 60}$$

d (lb/ft^3) = Density of exhaust gases at 70 degrees F, use a value of 0.075.

$$F^l\ (acfs) = F \times \frac{(T_o + 460)}{530}$$

$$F^l \text{ design temperature} = F \times \frac{2460}{530}$$

scfs = standard cubic feet per second
acfs = actual cubic feet per second

STEP 6. Calculate the volume of secondary chamber.

STEP 7. Residence time = $\frac{\text{chamber volume}}{F^l}$

For a minimum 1 second (sec) secondary chamber residence time and design temperature 2000 degrees F,

$$\frac{\text{Secondary chamber volume}}{F^l} \; m = > 1$$

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SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.5
AIR POLLUTION CONTROL STANDARDS

STANDARD NO. 4
EMISSIONS FROM PROCESS INDUSTRIES

SECTION I - GENERAL

A. The method which is approved by the Department for determining compliance with opacity limitations under this standard is Environmental Protection Agency (EPA) Reference Method 9 (40 Code of Federal Regulations (CFR) 60, Appendix A, as revised July 1, 1984). Alternate methods may be utilized only if approved in advance by the Department and by the EPA.

B. This standard will not supersede any requirements imposed by Federal New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), Federal or State Prevention of Significant Deterioration (PSD) Regulations, nor special permit conditions, unless this standard would impose a more restrictive emission limit.

SECTION II - SULFURIC ACID MANUFACTURING

A. The rate of emission of sulfur dioxide (SO_2) from sulfuric acid manufacturing shall be limited to no more than four (4) pounds of SO_2 per ton of 100 percent sulfuric acid produced and emissions of acid mist to 0.5 pounds of sulfuric acid per ton of 100 percent acid produced.

B. The maximum allowable stack outlet opacity from any source under this category is twenty (20) percent.

SECTION III - KRAFT PULP AND PAPER MANUFACTURING

The opacity from kraft pulp and paper manufacturing shall be limited to the following:

	Maximum Allowable Stack Opacity
Recovery Furnace	40 percent
Dissolving Tank	20 percent
Lime Kiln	20 percent

SECTION IV – [RESERVED]

SECTION V - COTTON GINS

A. Definitions

1. 1D-3D cyclone – Any cyclone-type collector of the 1D-3D configuration. This designation refers to the ratio of the cylinder to cone length, where D is the diameter of the cylinder portion. A 1D-3D cyclone has a cylinder length of 1xD and a cone length of 3xD.

2. 2D-2D cyclone – Any cyclone-type collector of the 2D-2D configuration. This designation refers to the ratio of the cylinder to cone length, where D is the diameter of the cylinder portion. A 2D-2D cyclone has a cylinder length of 2xD and a cone length of 2xD.

3. Bale – A compressed package of cotton lint weighing nominally 500 pounds.

4. Gin yard - The land upon which a cotton gin is located and all contiguous land having common ownership or use.

5. Ginning operation – Any facility or plant that separates cotton lint from cotton seed. This process typically includes cleaning (removing plant material, dirt, and other foreign matter) and packaging the lint into bales.

6. Ginning season – The period of time during which the gin is in operation; usually between (but not limited to) September of the current year and January of the following year.

7. High pressure exhausts – The exhaust air systems at a cotton gin preceding the gin stand (including unloading, drying, extracting, cleaning, and overflow handling systems) in which material is conveyed by a higher pressure air and is typically controlled by cyclones.

8. Low pressure exhausts – The exhaust air systems at a cotton gin following the gin stand (including lint cotton cleaning and battery formation process) in which material is conveyed by low pressure air and is typically controlled by condensers.

9. Removal efficiency – Percent of total particulate matter removed from the gas stream between a cyclone's inlet and outlet.

B. Applicability

1. This rule applies to all existing, new, and modified cotton ginning operations in South Carolina. These facilities will be subject to registration permit conditions as specified in Regulation 61-62.1, Section II.I.

2. Existing facilities with a maximum gin stand rated capacity (or documented equipment limitation) of less than twenty (20) bales per hour that do not have cyclones on lint cleaning system exhausts and battery condenser exhausts as of promulgation date of this rule, will not be required to add the emission control devices in paragraph C.2 below to lint cleaning exhausts or battery condenser exhausts if emissions from these exhausts are controlled by fine mesh screens.

C. Emission Control Requirements

1. New facilities will be required to apply for a registration permit before commencement of construction. Existing facilities will be required to apply for a registration permit within ninety (90) days of the promulgation date of this rule. Until such time that a registration permit is issued by the Department, existing cotton ginning operations should operate with existing permits.

2. Each cotton ginning operation shall install and operate a particulate emission control system on all

high and low pressure exhausts and lint cleaning system exhausts that includes one (1) or more 1D-3D or 2D-2D cyclones meeting the cylinder diameter requirements to produce a 3.5 to 6.0 or 3.0 to 5.5 inches of water pressure drop (respectively) as illustrated in Figure 6-20 and 6-21 of the Agricultural Handbook Number 503, Cotton Ginners Handbook, dated December 1994. Existing facilities shall comply with these control equipment requirements by August 31, 2012.

3. Air pollutant emissions shall not exceed twenty (20) percent opacity.

4. Stacks shall not be equipped with raincaps or other devices that deflect the emissions downward or outward.

5. Trash stacker areas shall contain one (1) of the following:

a. A three (3) sided enclosure with a roof whose sides are high enough above the opening of the dumping device to prevent wind from dispersing dust or debris; or

b. A device to provide wet suppression at the dump area of the trash cyclone and minimize free fall distance of waste material exiting the trash cyclone.

6. The owner or operator shall ensure that all trucks transporting gin trash material are covered and that the trucks are cleaned of over-spill material before trucks leave the trash hopper dump area.

7. Reasonable precautions should be taken when operating or maintaining storage piles, materials, equipment, or vehicles in order to prevent any substance from being scattered by the wind or air in order to prevent fugitive dust emissions in accordance with Regulation 61-62.6, Section II.

D. Alternative Control Measures

1. The owner or operator of a cotton ginning operation may petition the Department to use alternative control measures to those specified in this rule. The petition shall include:

a. The name and address of the petitioner;

b. The location and description of the cotton ginning operation;

c. A description of the alternative control measure; and

d. A demonstration that the alternative control measure is at least as effective as the control device or method specified in this rule.

2. Once approved, repairs and maintenance of such devices will not require notification to the Department.

E. Monitoring

1. To ensure that the minimum required removal efficiency is maintained, the owner or operator shall establish, based on manufacturer’s recommendations or industry standards, an inspection and maintenance schedule for the control devices, other emission processing equipment, and monitoring devices that are used pursuant to this rule. The inspection and maintenance schedule shall be followed throughout the ginning season. The results of the inspections and any maintenance performed on the control equipment, emission processing equipment, or monitoring devices shall be documented in an on-

site logbook and made available to the Department upon request. The owner or operator should keep a copy of the manufacturer's specifications for each type of control device installed.

2. On a weekly basis, the owner or operator shall measure and calculate the pressure drops across all cyclones. Measurements shall be made using a manometer, a Magnahelic® gauge, or other device that the Department has approved as being equivalent to a manometer. These measurements should be recorded in the logbook referred to in paragraph E.1 above. If the owner or operator measures a static pressure out of the range indicated in paragraph C.2 above, the owner or operator shall initiate corrective action. Corrective action shall be recorded in the logbook. If corrective action will take more than forty-eight (48) hours to complete, the owner or operator shall notify the Department no later than the end of the day such static pressure is measured.

3. During the ginning season, the owner or operator shall weekly inspect for structural integrity of the control devices and other emissions processing systems and shall ensure that the control devices and emission processing systems conform to normal and proper operation of the gin. Fine mesh screens should be inspected daily throughout the ginning season and any clogs should be removed. If a problem is found, corrective action shall be taken and recorded in the logbook required in paragraph E.1 above.

4. If control devices are repaired or replaced with equivalent control equipment, the facility must maintain on-site documentation showing compliance with the conditions specified in Section V.C of this standard or previously allowed for under Section V.D of this standard.

5. The owner or operator shall retain all records required by this rule for three (3) years from the date of recording.

SECTION VI - HOT MIX ASPHALT MANUFACTURING

A. The rate of emissions of particulate matter from hot mix asphalt manufacturing shall be limited to the following:

Production Rate (Tons Per Hour)	Maximum Allowable Emission Rate (Pounds Per Hour)
20	22
50	31
100	38
150	45
200	51
250	56
300	61
350 and above	65

B. All hot mix asphalt plants shall be equipped with a fugitive dust and/or fugitive emissions control system which shall be operated and maintained in such a manner as to reduce to a minimum the emissions of particulate matter from any point other than the stack outlet.

C. The maximum allowable stack opacity from hot mix asphalt manufacturing shall be twenty (20) percent.

SECTION VII - METAL REFINING

The maximum allowable opacity from any furnace building and/or operations building (including but not limited to pollution control systems, louvers, doors, openings, etc.) shall be twenty (20) percent.

SECTION VIII - OTHER MANUFACTURING

A. Particulate matter emissions where not specified elsewhere shall be limited to the rate specified in Table A (modified using the effect factors (F) of Table B as required). Kraft Pulp and Paper Manufacturing facilities are excluded from Section VIII.

B. Interpolation of the data in Table A for process weights up to thirty (30) tons per hour shall be accomplished by use of the equation:

$$E = (F)\ 4.10\ P^{0.67}$$

and interpolation and extrapolation of the data for process weight rates greater than thirty (30) tons per hour shall be accomplished by using the equation:

$$E = (F)\ (55.0\ P^{0.11} - 40)$$

Where: E = the allowable emission rate in pounds per hour
P = process weight rate in tons per hour
F = effect factor from Table B

TABLE A
Allowable Rate of Emission Based on Process Weight Rate*

Process Weight Rate (Tons/Hour)	Rate of Emission (Pounds/Hour)	Process Weight Rate (Tons/Hour)	Rate of Emission (Pounds/Hour)
0.05	0.551	8	16.5
0.10	0.877	9	17.9
0.20	1.40	10	19.2
0.30	1.83	15	25.2
0.40	2.22	20	30.5
0.50	2.58	25	35.4
0.75	3.38	30	40.0

Process Weight Rate (Tons/Hour)	Rate of Emission (Pounds/Hour)	Process Weight Rate (Tons/Hour)	Rate of Emission (Pounds/Hour)
1.00	4.10	35	41.3
1.25	4.75	40	42.5
1.50	5.38	45	43.6
1.75	5.96	50	44.6
2.00	6.52	60	46.3
2.50	7.58	70	47.8
3.00	8.56	80	49.0
3.50	9.49	100	51.2
4.00	10.4	500	69.0
4.50	11.2	1000	77.6
5.00	12.0	3000	92.7

* Please note that certain small operations may not require a permit (see exemptions under Regulation 62.1, Section II).

TABLE B
Effect Factor for Particulate Matter Emissions**
(To Be Used with Standard 4 - Section VIII)

Material	Effect Factor (F)
a. All materials not specifically listed hereunder	1.0
b. Elements and their compounds on the basis of the element contained therein***	none assigned
c. Specific Materials: Acid Mists	0.25

** The Board will make additions to this table as required from time to time to preserve public health and property in South Carolina.

*** When a material contains two (2) or more elements, the effect factor of the element having the lowest effect factor shall apply.

SECTION IX - VISIBLE EMISSIONS (WHERE NOT SPECIFIED ELSEWHERE)

A. Where construction or modification began on or before December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than forty (40) percent.

B. Where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than twenty (20) percent.

SECTION X - NON-ENCLOSED OPERATIONS

A. All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line.

B. The owner or operator of all such operations shall maintain dust control of the premises and any roadway owned or controlled by the owner or operator by paving or other suitable measures. Oil treatment is prohibited.

C. All crushing, drying, classification, and like operations shall employ a suitable control device acceptable to the Department, and shall discharge no more particulate matter than that specified in Section VIII of this standard.

SECTION XI - TOTAL REDUCED SULFUR (TRS) EMISSIONS OF KRAFT PULP MILLS

A. Applicability and Designation of Affected Sources

1. The provisions of this subpart are applicable to the following affected sources in kraft pulp mills which commenced construction prior to September 24, 1976: digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system.

2. The effective date of this section is February 22, 1980.

B. Total Reduced Sulfur (TRS) Emission Standards

The rate of TRS emissions from existing kraft pulp mills shall be limited to the following:

	Maximum Allowable Emission of TRS as Hydrogen Sulfide (H_2S) by Dry Volume, Averaged Over Twelve (12) Hours
Recovery Furnace	
Cross Recovery Furnaces	25 ppm (corrected to 8 percent oxygen)
Old Design Furnaces[1]	20 ppm (corrected to 8 percent oxygen)
New Design Furnaces[2]	5 ppm (corrected to 8 percent oxygen)
Digester System	5 ppm
Multiple-Effect Evaporator System	5 ppm
Lime Kiln	20 ppm (corrected to 10 percent oxygen)
Brown Stock Washer System	no control
Black Liquor Oxidation System	no control
Condensate Stripper System	5 ppm
Smelt Dissolving Tank	0.016 gram per kilogram (g/kg) BLS[3]

[1] Old design furnaces are defined as furnaces without welded wall or membrane wall construction or emission control designed air systems.

[2] New design furnaces are defined as furnaces with either welded wall or membrane wall construction and also with emission control designed air systems.

[3] Black liquor solids (dry weights).

C. Case-by-Case Exceptions to Provisions of Section XI.B Above

1. If the owner or operator of a source of TRS compounds regulated by this standard can demonstrate that compliance with applicable portions of Section XI.B would not be economically feasible, the Department may, on a case-by-case basis, allow emission limitations less stringent than those required by applicable parts of Section XI.B. All data pertinent to the showing of economic infeasibility must accompany a petition for this relief, and shall include a present value analysis showing economic infeasibility.

2. Exceptions granted under this part are not effective until submitted to and approved by the Administrator as a revision of the Implementation Plan for Control of Designated Pollutants, pursuant to Section 111(d) of the Clean Air Act as amended November 1990.

D. Monitoring, Recordkeeping, and Reporting

1. The owner/operator shall:

a. Calibrate, maintain, and operate continuous monitoring equipment to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, multiple-effect evaporator system, or condensate stripper system, except where these gases are subjected to a minimum temperature of 1200 degrees Fahrenheit (F) for at least 0.5 seconds in an incinerator or other device which does not generate TRS. The location of each monitoring system must be approved by the Department.

b. Install, calibrate, maintain, and operate a monitoring device which measures the combustion temperature at the point of incineration of effluent gases which are emitted from any lime kiln, recovery furnace, digester system, multiple-effect evaporator system, or condensate stripper system unless TRS monitors are required in paragraph D.1.a above. The monitoring device is to be certified by the manufacturer to be accurate within plus or minus one (1) percent of the temperature being measured.

c. Calibrate, maintain, and operate continuous monitoring equipment for any smelt dissolving tank.

(i) For the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gauge pressure of plus or minus two (2) inches water.

(ii) For the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within plus or minus fifteen (15) percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Department may be consulted for approval of alternative locations.

d. (i) Continuously monitored operating and/or stack parameters may be used as substitutes for TRS monitors provided that it is demonstrated to the satisfaction of the Department that a correlation exists between the monitored parameter and TRS concentration and the other requirements in paragraph D.1 above are fulfilled.

(ii) Alternative equivalent methods of monitoring must be approved by the Department and EPA.

2. Any owner or operator subject to the provisions of this section shall:

a. Calculate and record on a daily basis 12-hour average TRS concentrations for the two (2) consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate twelve (12) contiguous 1-hour average TRS concentrations provided by each continuous monitoring system installed under paragraph D.1.a above.

b. Calculate and record on a daily basis 12-hour average oxygen concentrations for the two (2) consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph D.2.a above and shall be determined as an arithmetic mean of the appropriate twelve (12) contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph D.1.a above.

c. Correct all 12-hour average TRS concentrations to ten (10) volume percent oxygen, except that all 12-hour average TRS concentrations from a recovery furnace shall be corrected to eight (8) volume percent using the following equation:

$$C_{corr} = C_{uncorr} \times (21-X/21-Y)$$

where: C_{corr} = the concentration corrected for oxygen
C_{uncorr} = the concentration uncorrected for oxygen
X = the volumetric oxygen concentration percentage to be corrected to eight (8) percent for recovery furnaces and ten (10) percent for lime kilns, incinerators, or other devices
Y = the measured 12-hour average volumetric oxygen concentration

3. Each owner or operator required to install a continuous monitoring system shall submit a written report of excess emissions (as defined in applicable subparts) to the Department for every semi-annual period unless specified on a more frequent cycle by the Department. All semi-annual reports shall be postmarked by the 30th day following the end of each semi-annual period and shall include the following information:

a. For emissions from any recovery furnace, periods of excess emissions are all 12-hour average TRS concentrations above twenty (20) parts per million by volume (ppmv) for old design recovery furnaces, five (5) ppmv for new design recovery furnaces, and above twenty-five (25) ppmv for cross recovery furnaces;

b. For emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentrations above twenty (20) ppmv;

c. For emissions from any digester system, multiple-effect evaporator system, or condensate stripper system, periods of excess emissions are:

(i) All 12-hour average TRS concentrations above five (5) ppmv unless the provisions of paragraph D.1.a above apply; or

(ii) All periods in excess of five (5) minutes and their duration during which the combustion temperature is less than 1200 degrees F if the gases are combusted in an incinerator or other device which

does not generate TRS.

SECTION XII - PERIODIC TESTING – PARTICULATE MATTER EMISSIONS AND/OR SULFUR DIOXIDE (SO_2)

An owner or operator of a source listed below shall perform scheduled periodic tests for particulate matter emissions and/or SO_2 every two (2) years except as noted, or on a schedule as stipulated by special permit conditions, and shall ensure that source tests are conducted in accordance with Regulation 61-62.1, Section IV, Source Tests.

A. Rotary kilns, clinker coolers, and rotary dryers of Portland Cement plants.

B. Sulfuric acid plants.

C. Metallurgical furnaces greater than ten (10) tons per hour normal output.

D. Asphalt plants. Asphalt plants that have a baghouse operating in a satisfactory manner with sufficiently low visible emissions may be exempted at the discretion of the Department. Asphalt plants will be required to produce "surface mix" during compliance source testing. "Surface mix" is hot laid asphaltic concrete surface courses (except sand asphalt surface mix) as defined in Section 403 of the 1986 edition of the South Carolina State Highway Department's "Standard Specifications for Highway Construction" manual. The Department may, at its discretion, waive this requirement if sufficient evidence indicates that less than twenty-five (25) percent of the plant's total annual production is surface mix.

E. Fertilizer plants.

F. Any other sources which are deemed necessary.

SECTION XIII - [RESERVED]

R. 61-62.5, Standard No. 4 History - *South Carolina State Register*:

Vol. 7, Issue No. 2, (Doc. No. ?), February 25, 1983;
Vol. 7, Issue No. 6, (Doc. No. 314), June 24, 1983;
Vol. 9, Issue No. 5, (Doc. No. 457), May 24, 1985;
Vol. 13, Issue No. 2, (Doc. No. 868), February 24, 1989;
Vol. 12, Issue No. 4, (Doc. No. 970), April 22, 1988;
Vol. 22, Issue 6, (Doc. No. 2244), June 26, 1998;
Vol. 25, Issue No. 10, (Doc. No. 2648), October 26, 2001;
Vol. 31, Issue No. 5, (Doc. No. 3069), May 25, 2007;
Vol. 35, Issue No. 5, (Doc. No. 4130), May 27, 2011;
Vol. 36, Issue No. 12, (Errata), December 28, 2012;
Vol. 37, Issue No. 4, (Doc. No. 4330), April 26, 2013;
Vol. 38, Issue No. 6, (Doc. No. 4388), June 27, 2014;
Vol. 40, Issue No. 6, (Doc. No. 4590), June 24, 2016.
Vol. 40, Issue No. 9, (Doc. No. 4650), September 23, 2016.

SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.60
SOUTH CAROLINA DESIGNATED FACILITY PLAN AND
NEW SOURCE PERFORMANCE STANDARDS

Note: Facilities subject to the regulations listed below may be subject to additional requirements specified elsewhere in Regulation 61-62, Air Pollution Control Regulations and Standards.

Subpart A - "General Provisions"

The provisions of 40 Code of Federal Regulations (CFR) Part 60 Subpart A, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart A			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 36	December 23, 1971	[36 FR 24877]
Revision	Vol. 38	October 15, 1973	[38 FR 28565]
Revision	Vol. 39	March 8, 1974	[39 FR 9314]
Revision	Vol. 39	November 12, 1974	[39 FR 39873]
Revision	Vol. 40	April 25, 1975	[40 FR 18169]
Revision	Vol. 40	October 6, 1975	[40 FR 46254]
Revision	Vol. 40	November 17, 1975	[40 FR 53346]
Revision	Vol. 40	December 16, 1975	[40 FR 58418]
Revision	Vol. 40	December 22, 1975	[40 FR 59205]
Revision	Vol. 41	August 20, 1976	[41 FR 35185]
Revision	Vol. 42	July 19, 1977	[42 FR 37000]
Revision	Vol. 42	July 27, 1977	[42 FR 38178]
Revision	Vol. 42	November 1, 1977	[42 FR 57126]
Revision	Vol. 43	March 3, 1978	[43 FR 8800]
Revision	Vol. 43	August 3, 1978	[43 FR 34347]
Revision	Vol. 44	June 11, 1979	[44 FR 33612]
Revision	Vol. 44	September 25, 1979	[44 FR 55173]
Revision	Vol. 45	January 23, 1980	[45 FR 5617]
Revision	Vol. 45	April 4, 1980	[45 FR 23379]
Revision	Vol. 45	December 24, 1980	[45 FR 85415]
Revision	Vol. 47	January 8, 1982	[47 FR 951]
Revision	Vol. 47	July 23, 1982	[47 FR 31876]
Revision	Vol. 48	March 30, 1983	[48 FR 13326]
Revision	Vol. 48	May 25, 1983	[48 FR 23610]
Revision	Vol. 48	July 20, 1983	[48 FR 32986]
Revision	Vol. 48	October 18, 1983	[48 FR 48335]

40 CFR Part 60 Subpart A			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 50	December 27, 1985	[50 FR 53113]
Revision	Vol. 51	January 15, 1986	[51 FR 1790]
Revision	Vol. 51	January 21, 1986	[51 FR 2701]
Revision	Vol. 51	November 25, 1986	[51 FR 42796]
Revision	Vol. 52	March 26, 1987	[52 FR 9781, 9782]
Revision	Vol. 52	April 8, 1987	[52 FR 11428]
Revision	Vol. 52	May 11, 1987	[52 FR 17555]
Revision	Vol. 52	June 4, 1987	[52 FR 21007]
Revision	Vol. 54	February 14, 1989	[54 FR 6662]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 55	December 13, 1990	[55 FR 51382]
Revision	Vol. 57	July 21, 1992	[57 FR 32338, 32339]
Revision	Vol. 59	March 16, 1994	[59 FR 12427, 12428]
Revision	Vol. 59	September 15, 1994	[59 FR 47265]
Revision	Vol. 61	March 12, 1996	[61 FR 9919]
Revision	Vol. 62	February 24, 1997	[62 FR 8328]
Revision	Vol. 62	September 15, 1997	[62 FR 48348]
Revision	Vol. 63	May 4, 1998	[63 FR 24444]
Revision	Vol. 64	February 12, 1999	[64 FR 7463]
Revision	Vol. 65	August 10, 2000	[65 FR 48914]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 6, 2000	[65 FR 76350, 76378]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]
Revision	Vol. 66	February 6, 2001	[66 FR 9034]
Revision	Vol. 67	June 28, 2002	[67 FR 43550]
Revision	Vol. 68	April 14, 2003	[68 FR 17990]
Revision	Vol. 68	May 28, 2003	[68 FR 31611]
Revision	Vol. 69	July 8, 2004	[69 FR 41346]
Revision	Vol. 70	December 16, 2005	[70 FR 74870]
Revision	Vol. 71	June 1, 2006	[71 FR 31100]
Revision	Vol. 71	July 6, 2006	[71 FR 38482]
Revision	Vol. 72	May 16, 2007	[72 FR 27437]
Revision	Vol. 72	June 13, 2007	[72 FR 32710]
Revision	Vol. 73	January 18, 2008	[73 FR 3568]
Revision	Vol. 73	April 3, 2008	[73 FR 18162]
Revision	Vol. 73	May 6, 2008	[73 FR 24870]
Revision	Vol. 73	May 27, 2008	[73 FR 30308]
Revision	Vol. 73	June 24, 2008	[73 FR 35838]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 74	January 28, 2009	[74 FR 5072]
Revision	Vol. 74	October 6, 2009	[74 FR 51368]
Revision	Vol. 74	October 8, 2009	[74 FR 51950]
Revision	Vol. 74	December 17, 2009	[74 FR 66921]

40 CFR Part 60 Subpart A			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 75	September 9, 2010	[75 FR 54970]
Revision	Vol. 75	September 13, 2010	[75 FR 55636]
Revision	Vol. 76	January 18, 2011	[76 FR 2832]
Revision	Vol. 76	March 21, 2011	[76 FR 15372]
Revision	Vol. 76	March 21, 2011	[76 FR 15704]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]
Revision	Vol. 77	August 14, 2012	[77 FR 48433]
Revision	Vol. 77	September 12, 2012	[77 FR 56422]
Revision	Vol. 78	January 30, 2013	[78 FR 6674]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 79	April 4, 2014	[79 FR 18952]
Revision	Vol. 80	March 16, 2015	[80 FR 13671]

Subpart B - "Adoption and Submittal of State Plans for Designated Facilities"

The provisions of 40 CFR Part 60 Subpart B, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart B			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 40	November 17, 1975	[40 FR 53346]
Revision	Vol. 44	November 9, 1979	[44 FR 65071]
Revision	Vol. 54	December 20, 1989	[54 FR 52189]
Revision	Vol. 60	December 19, 1995	[60 FR 65387]
Revision	Vol. 65	December 6, 2000	[65 FR 76378]
Revision	Vol. 70	October 13, 2005	[70 FR 59848]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]

Subpart C - "Emission Guidelines and Compliance Times"

The provisions of 40 CFR Part 60 Subpart C, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart C			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 42	October 18, 1977	[42 FR 55797]
Revision	Vol. 60	December 19, 1995	[60 FR 65387]
Revision	Vol. 61	March 12, 1996	[61 FR 9905]
Revision	Vol. 62	September 15, 1997	[62 FR 48348]

Subpart Ca - [Reserved]

Subpart Cb - "Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994"

The provisions of 40 CFR Part 60 Subpart Cb, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Cb			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	December 19, 1995	[60 FR 65415]
Revision	Vol. 62	August 25, 1997	[62 FR 45119, 45120]
Revision	Vol. 62	August 25, 1997	[62 FR 45125]
Revision	Vol. 69	July 14, 2004	[69 FR 42117]
Revision	Vol. 71	May 10, 2006	[71 FR 27324]

Subpart Cc - "Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills"

The provisions of 40 CFR Part 60 Subpart Cc, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Cc			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	March 12, 1996	[61 FR 9905]
Revision	Vol. 63	June 16, 1998	[63 FR 32743]
Revision	Vol. 64	February 24, 1999	[64 FR 9258]

Subpart Cd - "Emission Guidelines and Compliance Times for Sulfuric Acid Production Units"

The provisions of 40 CFR Part 60 Subpart Cd, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Cd			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	December 19, 1995	[60 FR 65414]

Subpart Ce - "Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators"

The provisions of 40 CFR Part 60 Subpart Ce, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Ce			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 62	September 15, 1997	[62 FR 48379]
Revision	Vol. 74	October 6, 2009	[74 FR 51368]

40 CFR Part 60 Subpart Ce			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 76	April 4, 2011	[76 FR 18407]

Subpart D - "Standards of Performance for Fossil-Fuel-Fired Steam Generators"

The provisions of 40 CFR Part 60 Subpart D, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart D			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	June 14, 1974	[39 FR 20791]
Revision	Vol. 40	January 16, 1975	[40 FR 2803]
Revision	Vol. 40	October 6, 1975	[40 FR 46256]
Revision	Vol. 41	November 22, 1976	[41 FR 51398]
Revision	Vol. 42	July 25, 1977	[42 FR 37936]
Revision	Vol. 42	December 5, 1977	[42 FR 61537]
Revision	Vol. 43	March 7, 1978	[43 FR 9278]
Revision	Vol. 44	June 17, 1979	[44 FR 33612]
Revision	Vol. 44	December 28, 1979	[44 FR 76787]
Revision	Vol. 45	May 29, 1980	[45 FR 36077]
Revision	Vol. 45	July 14, 1980	[45 FR 47146]
Revision	Vol. 46	November 24, 1981	[46 FR 57498]
Revision	Vol. 48	January 27, 1983	[48 FR 3736]
Revision	Vol. 51	November 25, 1986	[51 FR 42797]
Revision	Vol. 52	August 4, 1987	[52 FR 28954]
Revision	Vol. 54	February 14, 1989	[54 FR 6662]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 55	February 14, 1990	[55 FR 5212]
Revision	Vol. 61	September 24, 1996	[61 FR 49976]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 72	June 13, 2007	[72 FR 32710]
Revision	Vol. 74	January 28, 2009	[74 FR 5072]
Revision	Vol. 76	January 20, 2011	[76 FR 3517]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]

Subpart Da - "Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978"

The provisions of 40 CFR Part 60 Subpart Da, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Da			
Federal Register Citation	**Volume**	**Date**	**Notice**

40 CFR Part 60 Subpart Da			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 44	June 11, 1979	[44 FR 33613]
Revision	Vol. 48	January 27, 1983	[48 FR 3737]
Revision	Vol. 54	February 14, 1989	[54 FR 6663]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 55	February 14, 1990	[55 FR 5212]
Revision	Vol. 55	May 7, 1990	[55 FR 18876]
Revision	Vol. 63	September 16, 1998	[63 FR 49453, 49454]
Revision	Vol. 64	February 12, 1999	[64 FR 7464]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 66	April 10, 2001	[66 FR 18546]
Revision	Vol. 66	June 11, 2001	[66 FR 31177]
Revision	Vol. 66	August 14, 2001	[66 FR 42608]
Revision	Vol. 71	February 27, 2006	[71 FR 9866]
Revision	Vol. 72	June 13, 2007	[72 FR 32710]
Revision	Vol. 74	January 28, 2009	[74 FR 5072]
Revision	Vol. 76	January 20, 2011	[76 FR 3517]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]
Revision	Vol. 77	April 19, 2012	[77 FR 23399]
Revision	Vol. 78	April 24, 2013	[78 FR 24073]
Revision	Vol.79	November 19, 2014	[79 FR 68777]

Subpart Db - "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units"

The provisions of 40 CFR Part 60 Subpart Db, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Db			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 52	December 16, 1987	[52 FR 47842]
Revision	Vol. 54	December 18, 1989	[54 FR 51819, 51820]
Revision	Vol. 54	December 18, 1989	[54 FR 51825]
Revision	Vol. 55	May 7, 1990	[55 FR 18876]
Revision	Vol. 60	May 30, 1995	[60 FR 28062]
Revision	Vol. 61	March 29, 1996	[61 FR 14031]
Revision	Vol. 62	October 8, 1997	[62 FR 52641]
Revision	Vol. 63	September 16, 1998	[63 FR 49455]
Revision	Vol. 64	February 12, 1999	[64 FR 7464]
Revision	Vol. 65	March 13, 2000	[65 FR 13242]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 66	April 10, 2001	[66 FR 18546]
Revision	Vol. 66	June 11, 2001	[66 FR 31177]
Revision	Vol. 66	August 14, 2001	[66 FR 42608]

40 CFR Part 60 Subpart Db			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 66	October 1, 2001	[66 FR 49830]
Revision	Vol. 71	February 27, 2006	[71 FR 9866]
Revision	Vol. 71	November 16, 2006	[71 FR 66681]
Revision	Vol. 72	June 13, 2007	[72 FR 32710]
Revision	Vol. 74	January 28, 2009	[74 FR 5072]
Revision	Vol. 76	January 20, 2011	[76 FR 3517]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart Dc - "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"

The provisions of 40 CFR Part 60 Subpart Dc, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Dc			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 55	September 12, 1990	[55 FR 37683]
Revision	Vol. 61	May 8, 1996	[61 FR 20736]
Revision	Vol. 64	February 12, 1999	[64 FR 7465]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 71	February 27, 2006	[71 FR 9866]
Revision	Vol. 72	June 13, 2007	[72 FR 32710]
Revision	Vol. 74	January 28, 2009	[74 FR 5072]
Revision	Vol. 76	January 20, 2011	[76 FR 3517]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]

Subpart E - "Standards of Performance for Incinerators"

The provisions of 40 CFR Part 60 Subpart E, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart E			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 36	December 23, 1971	[36 FR 24877]
Revision	Vol. 39	June 14, 1974	[39 FR 20792]
Revision	Vol. 42	July 25, 1977	[42 FR 37936]
Revision	Vol. 54	February 14, 1989	[54 FR 6665]
Revision	Vol. 55	February 14, 1990	[55 FR 5212]
Revision	Vol. 56	February 11, 1991	[56 FR 5507]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 71	May 10, 2006	[71 FR 27324]

Subpart Ea - "Standards of Performance for Municipal Waste Combustors for Which

Construction Is Commenced After December 20, 1989, and on or Before September 20, 1994"

The provisions of 40 CFR Part 60 Subpart Ea, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Ea			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 56	February 11, 1991	[56 FR 5507]
Revision	Vol. 60	December 19, 1995	[60 FR 65384]
Revision	Vol. 64	February 12, 1999	[64 FR 7465]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart Eb - "Standards of Performance for Large Municipal Waste Combustors for Which Construction Is Commenced After September 20, 1994, or for Which Modification or Reconstruction Is Commenced After June 19, 1996"

The provisions of 40 CFR Part 60 Subpart Eb, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Eb			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	December 19, 1995	[60 FR 65419]
Revision	Vol. 62	August 25, 1997	[62 FR 45120, 45121]
Revision	Vol. 62	August 25, 1997	[62 FR 45125, 45126]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 66	July 12, 2001	[66 FR 36473]
Revision	Vol. 66	November 16, 2001	[66 FR 57824]
Revision	Vol. 71	May 10, 2006	[71 FR 27324]

Subpart Ec - "Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction Is Commenced After June 20, 1996"

The provisions of 40 CFR Part 60 Subpart Ec, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Ec			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 62	September 15, 1997	[62 FR 48382]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 68	October 30, 2003	[68 FR 61759]
Revision	Vol. 74	October 6, 2009	[74 FR 51368]
Revision	Vol. 76	April 4, 2011	[76 FR 18407]
Revision	Vol. 78	May 13, 2013	[78 FR 28052]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart F - "Standards of Performance for Portland Cement Plants"

The provisions of 40 CFR Part 60 Subpart F, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart F			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 36	December 23, 1971	[36 FR 24877]
Revision	Vol. 39	June 14, 1974	[39 FR 20793]
Revision	Vol. 39	November 12, 1974	[39 FR 39874]
Revision	Vol. 40	October 6, 1975	[40 FR 46258]
Revision	Vol. 42	July 25, 1977	[42 FR 37936]
Revision	Vol. 53	December 14, 1988	[53 FR 50363]
Revision	Vol. 54	February 14, 1989	[54 FR 6666]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 75	September 9, 2010	[75 FR 54970]
Revision	Vol. 78	February 12, 2013	[78 FR 10006]
Revision	Vol. 80	July 27, 2015	[80 FR 44771]

Subpart G - "Standards of Performance for Nitric Acid Plants"

The provisions of 40 CFR Part 60 Subpart G, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart G			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	June 14, 1974	[39 FR 20794]
Revision	Vol. 40	October 6, 1975	[40 FR 46258]
Revision	Vol. 42	July 25, 1977	[42 FR 37936]
Revision	Vol. 50	April 22, 1985	[50 FR 15894]
Revision	Vol. 54	February 14, 1989	[54 FR 6666]
Revision	Vol. 77	August 14, 2012	[77 FR 48433]

Subpart Ga - "Standards of Performance for Nitric Acid Plants for Which Construction, Reconstruction, or Modification Commenced After October 14, 2011"

The provisions of 40 CFR Part 60 Subpart Ga, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Ga			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 77	August 14, 2012	[77 FR 48433]
Revision	Vol. 79	May 6, 2014	[79 FR 25681]

Subpart H - "Standards of Performance for Sulfuric Acid Plants"

The provisions of 40 CFR Part 60 Subpart H, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart H			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 36	December 23, 1971	[36 FR 24877]
Revision	Vol. 39	June 14, 1974	[39 FR 20794]
Revision	Vol. 40	October 6, 1975	[40 FR 46258]
Revision	Vol. 42	July 25, 1977	[42 FR 37936]
Revision	Vol. 48	May 25, 1983	[48 FR 23611]
Revision	Vol. 48	September 29, 1983	[48 FR 44700]
Revision	Vol. 48	October 20, 1983	[48 FR 48669]
Revision	Vol. 54	February 14, 1989	[54 FR 6666]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart I - "Standards of Performance for Hot Mix Asphalt Facilities"

The provisions of 40 CFR Part 60 Subpart I, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart I			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	March 8, 1974	[39 FR 9314]
Revision	Vol. 40	October 6, 1975	[40 FR 46259]
Revision	Vol. 42	July 25, 1977	[42 FR 37936]
Revision	Vol. 51	April 10, 1986	[51 FR 12325]
Revision	Vol. 54	February 14, 1989	[54 FR 6667]

Subpart J - "Standards of Performance for Petroleum Refineries"

The provisions of 40 CFR Part 60 Subpart J, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart J			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	March 8, 1974	[39 FR 9315]
Revision	Vol. 40	October 6, 1975	[40 FR 46259]
Revision	Vol. 42	June 24, 1977	[42 FR 32427]
Revision	Vol. 42	August 4, 1977	[42 FR 39389]
Revision	Vol. 43	March 15, 1978	[43 FR 10868]
Revision	Vol. 44	March 12, 1979	[44 FR 13481]

40 CFR Part 60 Subpart J			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 44	October 25, 1979	[44 FR 61543]
Revision	Vol. 45	December 1, 1980	[45 FR 79453]
Revision	Vol. 48	May 25, 1983	[48 FR 23611]
Revision	Vol. 50	August 5, 1985	[50 FR 31701]
Revision	Vol. 51	November 26, 1986	[51 FR 42842]
Revision	Vol. 52	June 1, 1987	[52 FR 20392]
Revision	Vol. 53	October 21, 1988	[53 FR 41333]
Revision	Vol. 54	August 17, 1989	[54 FR 34026]
Revision	Vol. 55	October 2, 1990	[55 FR 40175]
Revision	Vol. 56	February 4, 1991	[56 FR 4176]
Revision	Vol. 64	February 12, 1999	[64 FR 7465]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 71	September 21, 2006	[71 FR 55119]
Revision	Vol. 73	June 24, 2008	[73 FR 35838]
Revision	Vol. 76	February 25, 2011	[76 FR 10524]
Revision	Vol. 77	September 12, 2012	[77 FR 56422]
Revision	Vol. 80	December 1, 2015	[80 FR 75178]

Subpart Ja - "Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007"

The provisions of 40 CFR Part 60 Subpart Ja, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Ja			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	June 24, 2008	[73 FR 35838]
Revision	Vol. 73	July 28, 2008	[73 FR 43626]
Revision	Vol. 73	September 26, 2008	[73 FR 55751]
Revision	Vol. 73	December 22, 2008	[73 FR 78546]
Revision	Vol. 73	December 22, 2008	[73 FR 78549]
Revision	Vol. 77	September 12, 2012	[77 FR 56422]
Revision	Vol. 78	December 19, 2013	[78 FR 76753]
Revision	Vol. 80	December 1, 2015	[80 FR 75178]

Subpart K - "Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978"

The provisions of 40 CFR Part 60 Subpart K, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart K

Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 39	March 8, 1974	[39 FR 9317]
Revision	Vol. 39	April 17, 1974	[39 FR 13776]
Revision	Vol. 39	June 14, 1974	[39 FR 20794]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 45	April 4, 1980	[45 FR 23379]
Revision	Vol. 48	January 27, 1983	[48 FR 3737]
Revision	Vol. 52	April 8, 1987	[52 FR 11429]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart Ka - "Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984"

The provisions of 40 CFR Part 60 Subpart Ka, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Ka			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 45	April 4, 1980	[45 FR 23379]
Revision	Vol. 45	December 18, 1980	[45 FR 83229]
Revision	Vol. 48	January 27, 1983	[48 FR 3737]
Revision	Vol. 52	April 8, 1987	[52 FR 11429]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]

Subpart Kb - "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984"

The provisions of 40 CFR Part 60 Subpart Kb, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Kb			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 52	April 8, 1987	[52 FR 11429]
Revision	Vol. 52	June 16, 1987	[52 FR 22780]
Revision	Vol. 54	August 11, 1989	[54 FR 32973]
Revision	Vol. 62	October 8, 1997	[62 FR 52641]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]
Revision	Vol. 68	October 15, 2003	[68 FR 59328]

Subpart L - "Standards of Performance for Secondary Lead Smelters"

The provisions of 40 CFR Part 60 Subpart L, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart L			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	March 8, 1974	[39 FR 9317]
Revision	Vol. 39	April 17, 1974	[39 FR 13776]
Revision	Vol. 40	October 6, 1975	[40 FR 46259]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 54	February 14, 1989	[54 FR 6667]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart M - "Standards of Performance for Secondary Brass and Bronze Production Plants"

The provisions of 40 CFR Part 60 Subpart M, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart M			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	March 8, 1974	[39 FR 9318]
Revision	Vol. 40	October 6, 1975	[40 FR 46259]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 49	October 30, 1984	[49 FR 43618]
Revision	Vol. 54	February 14, 1989	[54 FR 6667]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart N - "Standards of Performance for Primary Emissions from Basic Oxygen Process Furnaces for Which Construction Is Commenced After June 11, 1973"

The provisions of 40 CFR Part 60 Subpart N, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart N			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 39	March 8, 1974	[39 FR 9318]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 43	April 13, 1978	[43 FR 15602]
Revision	Vol. 51	January 2, 1986	[51 FR 160]
Revision	Vol. 54	February 14, 1989	[54 FR 6667]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart Na - "Standards of Performance for Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction Is Commenced After January 20, 1983"

The provisions of 40 CFR Part 60 Subpart Na, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Na			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 51	January 2, 1986	[51 FR 161]
Revision	Vol. 54	February 14, 1989	[54 FR 6667]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart O - "Standards of Performance for Sewage Treatment Plants"

The provisions of 40 CFR Part 60 Subpart O, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart O			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 36	December 23, 1971	[36 FR 24877]
Revision	Vol. 39	March 8, 1974	[39 FR 9319]
Revision	Vol. 40	October 6, 1975	[40 FR 46259]
Revision	Vol. 42	November 10, 1977	[42 FR 58521]
Revision	Vol. 53	October 6, 1988	[53 FR 39416]
Revision	Vol. 54	February 14, 1989	[54 FR 6668]
Revision	Vol. 54	June 27, 1989	[54 FR 27015]
Revision	Vol. 58	April 7, 1993	[58 FR 18014]
Revision	Vol. 59	February 3, 1994	[59 FR 5108]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart P - "Standards of Performance for Primary Copper Smelters"

The provisions of 40 CFR Part 60 Subpart P, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart P			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 41	January 15, 1976	[41 FR 2338]
Revision	Vol. 41	February 26, 1976	[41 FR 8346]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 42	November 1, 1977	[42 FR 57126]
Revision	Vol. 48	May 25, 1983	[48 FR 23611]
Revision	Vol. 54	February 14, 1989	[54 FR 6667]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart Q - "Standards of Performance for Primary Zinc Smelters"

The provisions of 40 CFR Part 60 Subpart Q, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Q			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 41	January 15, 1976	[41 FR 2340]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 48	May 25, 1983	[48 FR 23611]
Revision	Vol. 54	February 14, 1989	[54 FR 6669]

Subpart R - "Standards of Performance for Primary Lead Smelters"

The provisions of 40 CFR Part 60 Subpart R, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart R			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 41	January 15, 1976	[41 FR 2340]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 48	May 25, 1983	[48 FR 23611]
Revision	Vol. 54	February 14, 1989	[54 FR 6669]

Subpart S - "Standards of Performance for Primary Aluminum Reduction Plants"

The provisions of 40 CFR Part 60 Subpart S, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart S			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 45	June 30, 1980	[45 FR 44207]
Revision	Vol. 54	February 14, 1989	[54 FR 6669]
Revision	Vol. 62	October 7, 1997	[62 FR 52399]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart T - "Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants"

The provisions of 40 CFR Part 60 Subpart T, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart T

Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 40	August 6, 1975	[40 FR 33154]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 48	February 17, 1983	[48 FR 7129]
Revision	Vol. 54	February 14, 1989	[54 FR 6669]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart U - "Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants"

The provisions of 40 CFR Part 60 Subpart U, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart U			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 40	August 6, 1975	[40 FR 33155]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 48	February 17, 1983	[48 FR 7129]
Revision	Vol. 54	February 14, 1989	[54 FR 6670]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart V - "Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants"

The provisions of 40 CFR Part 60 Subpart V, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart V			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 40	August 6, 1975	[40 FR 33155]
Revision	Vol. 42	July 25, 1977	[42 FR 37937]
Revision	Vol. 48	February 17, 1983	[48 FR 7129]
Revision	Vol. 54	February 14, 1989	[54 FR 6670]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart W - "Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants"

The provisions of 40 CFR Part 60 Subpart W, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart W			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 40	August 6, 1975	[40 FR 33156]
Revision	Vol. 42	July 25, 1977	[42 FR 37938]
Revision	Vol. 48	February 17, 1983	[48 FR 7129]
Revision	Vol. 54	February 14, 1989	[54 FR 6670]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart X - "Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities"

The provisions of 40 CFR Part 60 Subpart X, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart X			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 40	August 6, 1975	[40 FR 33156]
Revision	Vol. 42	July 25, 1977	[42 FR 37938]
Revision	Vol. 54	February 14, 1989	[54 FR 6670]
Revision	Vol. 62	April 15, 1997	[62 FR 18280]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart Y - "Standards of Performance for Coal Preparation and Processing Plants"

The provisions of 40 CFR Part 60 Subpart Y, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Y			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 41	January 15, 1976	[41 FR 2234]
Revision	Vol. 42	July 25, 1977	[42 FR 37938]
Revision	Vol. 42	September 7, 1977	[42 FR 44812]
Revision	Vol. 48	January 27, 1983	[48 FR 3738]
Revision	Vol. 54	February 14, 1989	[54 FR 6671]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 74	October 8, 2009	[74 FR 51950]

Subpart Z - "Standards of Performance for Ferroalloy Production Facilities"

The provisions of 40 CFR Part 60 Subpart Z, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart Z			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 41	May 4, 1976	[41 FR 18501]
Revision	Vol. 41	May 20, 1976	[41 FR 20659]
Revision	Vol. 42	July 25, 1977	[42 FR 37938]
Revision	Vol. 48	January 27, 1983	[48 FR 3738]
Revision	Vol. 54	February 14, 1989	[54 FR 6671]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 55	February 14, 1990	[55 FR 5212]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart AA - "Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and on or Before August 17, 1983"

The provisions of 40 CFR Part 60 Subpart AA, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart AA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 40	September 23, 1975	[40 FR 43852]
Revision	Vol. 49	October 31, 1984	[49 FR 43843]
Revision	Vol. 54	February 14, 1989	[54 FR 6672]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 64	March 2, 1999	[64 FR 10109, 10110]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 70	February 22, 2005	[70 FR 8523]

Subpart AAa - "Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983"

The provisions of 40 CFR Part 60 Subpart AAa, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart AAa			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	October 31, 1984	[49 FR 43845]
Revision	Vol. 54	February 14, 1989	[54 FR 6672]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 64	March 2, 1999	[64 FR 10110, 10111]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 70	February 22, 2005	[70 FR 8523]

Subpart BB - "Standards of Performance for Kraft Pulp Mills"

The provisions of 40 CFR Part 60 Subpart BB, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart BB			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 43	February 23, 1978	[43 FR 7572]
Revision	Vol. 50	February 14, 1985	[50 FR 6317]
Revision	Vol. 51	May 20, 1986	[51 FR 18544]
Revision	Vol. 54	February 14, 1989	[54 FR 6673]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 55	February 14, 1990	[55 FR 5212]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 71	September 21, 2006	[71 FR 55119]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 79	April 4, 2014	[79 FR 18952]

Subpart BBa - "Standards of Performance for Kraft Pulp Mill Affected Sources for Which Construction, Reconstruction, or Modification Commenced After May 23, 2013"

The provisions of 40 CFR Part 60 Subpart BBa, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart BBa			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 79	April 4, 2014	[79 FR 18952]

Subpart CC - "Standards of Performance for Glass Manufacturing Plants"

The provisions of 40 CFR Part 60 Subpart CC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart CC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 45	October 7, 1980	[45 FR 66751]
Revision	Vol. 49	October 19, 1984	[49 FR 41035]
Revision	Vol. 54	February 14, 1989	[54 FR 6674]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 64	February 12, 1999	[64 FR 7466]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart DD - "Standards of Performance for Grain Elevators"

The provisions of 40 CFR Part 60 Subpart DD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart DD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 43	August 3, 1978	[43 FR 34347]
Revision	Vol. 53	November 5, 1988	[53 FR 42434]
Revision	Vol. 54	February 14, 1989	[54 FR 6674]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart EE - "Standards of Performance for Surface Coating of Metal Furniture"

The provisions of 40 CFR Part 60 Subpart EE, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart EE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	October 29, 1982	[47 FR 49287]
Revision	Vol. 50	April 30, 1985	[50 FR 18248]
Revision	Vol. 55	December 13, 1990	[55 FR 51383]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart FF - [Reserved]

Subpart GG - "Standards of Performance for Stationary Gas Turbines"

The provisions of 40 CFR Part 60 Subpart GG, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart GG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 44	September 10, 1979	[44 FR 52798]
Revision	Vol. 47	January 27, 1982	[47 FR 3770]
Revision	Vol. 52	November 5, 1987	[52 FR 42434]
Revision	Vol. 54	February 14, 1989	[54 FR 6674]
Revision	Vol. 54	June 27, 1989	[54 FR 27016]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 68	April 14, 2003	[68 FR 17990]
Revision	Vol. 69	July 8, 2004	[69 FR 41346]
Revision	Vol. 71	February 24, 2006	[71 FR 9453]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart HH - "Standards of Performance for Lime Manufacturing Plants"

The provisions of 40 CFR Part 60 Subpart HH, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart HH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	April 26, 1984	[49 FR 18080]
Revision	Vol. 52	February 17, 1987	[52 FR 4773]
Revision	Vol. 54	February 14, 1989	[54 FR 6675]
Revision	Vol. 58	April 7, 1993	[58 FR 18014]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart II - [Reserved]

Subpart JJ - [Reserved]

Subpart KK - "Standards of Performance for Lead-Acid Battery Manufacturing Plants"

The provisions of 40 CFR Part 60 Subpart KK, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart KK			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	April 16, 1982	[47 FR 16573]
Revision	Vol. 54	February 14, 1989	[54 FR 6675]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart LL - "Standards of Performance for Metallic Mineral Processing Plants"

The provisions of 40 CFR Part 60 Subpart LL, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart LL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	February 21, 1984	[49 FR 6464]
Revision	Vol. 54	February 14, 1989	[54 FR 6676]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart MM - "Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations"

The provisions of 40 CFR Part 60 Subpart MM, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart MM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 45	December 24, 1980	[45 FR 85415]

40 CFR Part 60 Subpart MM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 48	February 4, 1983	[48 FR 5454]
Revision	Vol. 50	September 9, 1985	[50 FR 36834]
Revision	Vol. 55	December 13, 1990	[55 FR 51383]
Revision	Vol. 59	October 11, 1994	[59 FR 51386]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart NN - "Standards of Performance for Phosphate Rock Plants"

The provisions of 40 CFR Part 60 Subpart NN, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart NN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	April 16, 1982	[47 FR 16589]
Revision	Vol. 54	February 14, 1989	[54 FR 6676]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 64	February 12, 1999	[64 FR 7466]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart OO - [Reserved]

Subpart PP - "Standards of Performance for Ammonium Sulfate Manufacture"

The provisions of 40 CFR Part 60 Subpart PP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart PP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 45	November 12, 1980	[45 FR 74850]
Revision	Vol. 54	February 14, 1989	[54 FR 6676]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart QQ - "Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing"

The provisions of 40 CFR Part 60 Subpart QQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart QQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	November 8, 1982	[47 FR 50649]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart RR - "Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations"

The provisions of 40 CFR Part 60 Subpart RR, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart RR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 48	October 18, 1983	[48 FR 48375]
Revision	Vol. 55	December 13, 1990	[55 FR 51383]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart SS - "Standards of Performance for Industrial Surface Coating: Large Appliances"

The provisions of 40 CFR Part 60 Subpart SS, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart SS			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	October 27, 1982	[47 FR 47785]
Revision	Vol. 55	December 13, 1990	[55 FR 51383]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart TT - "Standards of Performance for Metal Coil Surface Coating"

The provisions of 40 CFR Part 60 Subpart TT, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart TT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	November 1, 1982	[47 FR 49612]
Revision	Vol. 48	January 10, 1983	[48 FR 1056]
Revision	Vol. 51	June 24, 1986	[51 FR 22938]
Revision	Vol. 55	December 13, 1990	[55 FR 51383]
Revision	Vol. 56	May 3, 1991	[56 FR 20497]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart UU - "Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture"

The provisions of 40 CFR Part 60 Subpart UU, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart UU			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	August 6, 1982	[47 FR 34143]
Revision	Vol. 54	February 14, 1989	[54 FR 6674]
Revision	Vol. 54	June 27, 1989	[54 FR 27016]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart VV - "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006"

The provisions of 40 CFR Part 60 Subpart VV, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart VV			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 48	October 18, 1983	[48 FR 48335]
Revision	Vol. 49	May 30, 1984	[49 FR 22607]
Revision	Vol. 49	June 29, 1984	[49 FR 26738]
Revision	Vol. 51	January 21, 1986	[51 FR 2702]
Revision	Vol. 54	February 14, 1989	[54 FR 6678]
Revision	Vol. 54	June 27, 1989	[54 FR 27016]
Revision	Vol. 60	August 18, 1995	[60 FR 43258]
Revision	Vol. 61	June 12, 1996	[61 FR 29878]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]
Revision	Vol. 72	November 16, 2007	[72 FR 64860]
Revision	Vol. 73	June 2, 2008	[73 FR 31372]
Revision	Vol. 73	June 2, 2008	[73 FR 31376]

Subpart VVa - "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006"

The provisions of 40 CFR Part 60 Subpart VVa, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart VVa			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	November 16, 2007	[72 FR 64860]
Revision	Vol. 73	June 2, 2008	[73 FR 31372]
Revision	Vol. 73	June 2, 2008	[73 FR 31376]

Subpart WW - "Standards of Performance for the Beverage Can Surface Coating Industry"

The provisions of 40 CFR Part 60 Subpart WW, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart WW			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 47	November 1, 1982	[47 FR 49612]
Revision	Vol. 55	December 13, 1990	[55 FR 51384]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart XX - "Standards of Performance for Bulk Gasoline Terminals"

The provisions of 40 CFR Part 60 Subpart XX, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart XX			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 48	August 18, 1983	[48 FR 37590]
Revision	Vol. 48	December 22, 1983	[48 FR 56580]
Revision	Vol. 54	February 14, 1989	[54 FR 6678]
Revision	Vol. 54	May 17, 1989	[54 FR 21344]
Revision	Vol. 64	February 12, 1999	[64 FR 7466]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 68	December 19, 2003	[68 FR 70960]

Subpart AAA - "Standards of Performance for New Residential Wood Heaters"

The provisions of 40 CFR Part 60 Subpart AAA, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart AAA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 53	February 26, 1988	[53 FR 5873]
Revision	Vol. 53	April 12, 1988	[53 FR 12009]
Revision	Vol. 53	April 26, 1988	[53 FR 14889]
Revision	Vol. 57	February 13, 1992	[57 FR 5328]
Revision	Vol. 60	June 29, 1995	[60 FR 33925]
Revision	Vol. 63	November 24, 1998	[63 FR 64874]
Revision	Vol. 64	February 12, 1999	[64 FR 7466]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 80	March 16, 2015	[80 FR 13671]

Subpart BBB - "Standards of Performance for the Rubber Tire Manufacturing Industry"

The provisions of 40 CFR Part 60 Subpart BBB, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart BBB			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 52	September 15, 1987	[52 FR 34874]
Revision	Vol. 52	October 9, 1987	[52 FR 37874]
Revision	Vol. 54	September 19, 1989	[54 FR 38635]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart CCC - [Reserved]

Subpart DDD - "Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry"

The provisions of 40 CFR Part 60 Subpart DDD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart DDD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 55	December 11, 1990	[55 FR 51035]
Revision	Vol. 56	March 5, 1991	[56 FR 9178]
Revision	Vol. 56	March 22, 1991	[56 FR 12299]
Revision	Vol. 58	April 7, 1993	[58 FR 18014]
Revision	Vol. 64	March 9, 1999	[64 FR 11541]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]

Subpart EEE - [Reserved]

Subpart FFF - "Standards of Performance for Flexible Vinyl and Urethane Coating and Printing"

The provisions of 40 CFR Part 60 Subpart FFF, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart FFF			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	June 29, 1984	[49 FR 26892]
Revision	Vol. 49	August 17, 1984	[49 FR 32848]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart GGG - "Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006"

The provisions of 40 CFR Part 60 Subpart GGG, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart GGG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	May 30, 1984	[49 FR 22606]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 72	November 16, 2007	[72 FR 64860]
Revision	Vol. 73	June 2, 2008	[73 FR 31372]
Revision	Vol. 73	June 2, 2008	[73 FR 31376]

Subpart GGGa - "Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006"

The provisions of 40 CFR Part 60 Subpart GGGa, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart GGGa			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	November 16, 2007	[72 FR 64860]
Revision	Vol. 73	June 2, 2008	[73 FR 31372]
Revision	Vol. 73	June 2, 2008	[73 FR 31376]

Subpart HHH - "Standards of Performance for Synthetic Fiber Production Facilities"

The provisions of 40 CFR Part 60 Subpart HHH, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart HHH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	April 5, 1984	[49 FR 13651]
Revision	Vol. 49	April 27, 1984	[49 FR 18096]
Revision	Vol. 55	December 13, 1990	[55 FR 51384]
Revision	Vol. 59	June 23, 1994	[59 FR 32341]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart III - "Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes"

The provisions of 40 CFR Part 60 Subpart III, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart III

Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 55	June 29, 1990	[55 FR 26922]
Revision	Vol. 55	September 7, 1990	[55 FR 36932]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]

Subpart JJJ - "Standards of Performance for Petroleum Dry Cleaners"

The provisions of 40 CFR Part 60 Subpart JJJ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart JJJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 49	September 21, 1984	[49 FR 37331]
Revision	Vol. 50	November 27, 1985	[50 FR 49026]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart KKK - "Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants"

The provisions of 40 CFR Part 60 Subpart KKK, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart KKK			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 50	June 24, 1985	[50 FR 26124]
Revision	Vol. 51	January 21, 1986	[51 FR 2702]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 77	August 16, 2012	[77 FR 49490]

Subpart LLL - "Standards of Performance for Onshore Natural Gas Processing: SO_2 Emissions"

The provisions of 40 CFR Part 60 Subpart LLL, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart LLL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 50	October 1, 1985	[50 FR 40160]
Revision	Vol. 54	February 14, 1989	[54 FR 6679]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 77	August 16, 2012	[77 FR 49490]

Subpart MMM - [Reserved]

Subpart NNN - "Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations"

The provisions of 40 CFR Part 60 Subpart NNN, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart NNN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 55	June 29, 1990	[55 FR 26942]
Revision	Vol. 55	September 7, 1990	[55 FR 36932]
Revision	Vol. 60	November 27, 1995	[60 FR 58237, 58238]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]
Revision	Vol. 74	June 24, 2009	[74 FR 29948]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart OOO - "Standards of Performance for Nonmetallic Mineral Processing Plants"

The provisions of 40 CFR Part 60 Subpart OOO, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart OOO			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 51	August 1, 1985	[51 FR 31337]
Revision	Vol. 54	February 14, 1989	[54 FR 6680]
Revision	Vol. 62	June 9, 1997	[62 FR 31360]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 74	April 28, 2009	[74 FR 19294]

Subpart PPP - "Standards of Performance for Wool Fiberglass Insulation Manufacturing Plants"

The provisions of 40 CFR Part 60 Subpart PPP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart PPP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 50	February 25, 1985	[50 FR 7699]
Revision	Vol. 54	February 14, 1989	[54 FR 6680]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart QQQ - "Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems"

The provisions of 40 CFR Part 60 Subpart QQQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart QQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 53	November 23, 1988	[53 FR 47623]
Revision	Vol. 60	August 18, 1995	[60 FR 43259]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart RRR - "Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes"

The provisions of 40 CFR Part 60 Subpart RRR, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart RRR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 58	August 31, 1993	[58 FR 45948]
Revision	Vol. 60	November 27, 1995	[60 FR 58238]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]

Subpart SSS - "Standards of Performance for Magnetic Tape Coating Facilities"

The provisions of 40 CFR Part 60 Subpart SSS, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart SSS			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 53	October 3, 1988	[53 FR 38914]
Revision	Vol. 53	October 28, 1988	[53 FR 43799]
Revision	Vol. 53	November 29, 1988	[53 FR 47955]
Revision	Vol. 53	December 9, 1988	[53 FR 49822]
Revision	Vol. 64	February 12, 1999	[64 FR 7467]

Subpart TTT - "Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines"

The provisions of 40 CFR Part 60 Subpart TTT, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart TTT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 53	January 29, 1988	[53 FR 2676]
Revision	Vol. 53	May 27, 1988	[53 FR 19300]
Revision	Vol. 54	June 15, 1989	[54 FR 25459]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart UUU - "Standards of Performance for Calciners and Dryers in Mineral Industries"

The provisions of 40 CFR Part 60 Subpart UUU, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart UUU			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 57	September 28, 1992	[57 FR 44503]
Revision	Vol. 58	July 29, 1993	[58 FR 40591]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]

Subpart VVV - "Standards of Performance for Polymeric Coating of Supporting Substrates Facilities"

The provisions of 40 CFR Part 60 Subpart VVV, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart VVV			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 54	September 11, 1989	[54 FR 37551]
Revision	Vol. 61	March 12, 1996	[61 FR 9905]

Subpart WWW - "Standards of Performance for Municipal Solid Waste Landfills"

The provisions of 40 CFR Part 60 Subpart WWW, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart WWW			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	March 12, 1996	[61 FR 9905]
Revision	Vol. 63	June 16, 1998	[63 FR 32743]
Revision	Vol. 64	February 24, 1999	[64 FR 9262]
Revision	Vol. 65	April 10, 2000	[65 FR 18906]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 71	September 21, 2006	[71 FR 55119]

Subpart XXX - [Reserved]

Subpart YYY - [Reserved]

Subpart ZZZ - [Reserved]

Subpart AAAA - "Standards of Performance for Small Municipal Waste Combustion Units for Which Construction Is Commenced After August 30, 1999, or for Which Modification or Reconstruction Is Commenced After June 6, 2001"

The provisions of 40 CFR Part 60 Subpart AAAA, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart AAAA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 65	December 6, 2000	[65 FR 76350]

Subpart BBBB - "Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999"

The provisions of 40 CFR Part 60 Subpart BBBB, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart BBBB			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 65	December 6, 2000	[65 FR 76378]

Subpart CCCC - "Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999, or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001"

The provisions of 40 CFR Part 60 Subpart CCCC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart CCCC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 65	December 1, 2000	[65 FR 75338]
Revision	Vol. 66	March 27, 2001	[66 FR 16605]
Revision	Vol. 70	September 22, 2005	[70 FR 55568]
Revision	Vol. 76	May 18, 2011	[76 FR 28662]
Revision	Vol. 78	February 7, 2013	[78 FR 9112]

Subpart DDDD - "Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or Before November 30, 1999"

The provisions of 40 CFR Part 60 Subpart DDDD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart DDDD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 65	December 1, 2000	[65 FR 75338]
Revision	Vol. 70	September 22, 2005	[70 FR 55568]
Revision	Vol. 76	May 18, 2011	[76 FR 28662]
Revision	Vol. 78	February 7, 2013	[78 FR 9112]

Subpart EEEE - "Standards of Performance for Other Solid Waste Incineration Units for Which Construction Is Commenced After December 9, 2004, or for Which Modification or Reconstruction Is Commenced on or After June 16, 2006"

The provisions of 40 CFR Part 60 Subpart EEEE, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart EEEE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 70	December 16, 2005	[70 FR 74870]
Revision	Vol. 71	November 24, 2006	[71 FR 67802]

Subpart FFFF - "Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction on or Before December 9, 2004"

The provisions of 40 CFR Part 60 Subpart FFFF, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart FFFF			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 70	December 16, 2005	[70 FR 74870]
Revision	Vol. 71	November 24, 2006	[71 FR 67802]

Subpart GGGG - [Reserved]

Subpart HHHH - [Reserved]

Subpart IIII - "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"

The provisions of 40 CFR Part 60 Subpart IIII, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart IIII			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 71	July 11, 2006	[71 FR 39154]
Revision	Vol. 76	June 28, 2011	[76 FR 37954]

40 CFR Part 60 Subpart IIII			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 78	January 30, 2013	[78 FR 6674]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart JJJJ - "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines"

The provisions of 40 CFR Part 60 Subpart JJJJ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart JJJJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	January 18, 2008	[73 FR 3568]
Revision	Vol. 73	October 8, 2008	[73 FR 59034]
Revision	Vol. 78	January 30, 2013	[78 FR 6674]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart KKKK – "Standards of Performance for Stationary Combustion Turbines"

The provisions of 40 CFR Part 60 Subpart KKKK, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart KKKK			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 71	July 6, 2006	[71 FR 38482]
Revision	Vol. 74	March 20, 2009	[74 FR 11858]

Subpart LLLL – "Standards of Performance for New Sewage Sludge Incineration Units"

The provisions of 40 CFR Part 60 Subpart LLLL, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart LLLL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 76	March 21, 2011	[76 FR 15372]

Subpart MMMM – "Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units"

The provisions of 40 CFR Part 60 Subpart MMMM, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart MMMM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 76	March 21, 2011	[76 FR 15372]

Subpart NNNN – [Reserved]

Subpart OOOO – "Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution"

The provisions of 40 CFR Part 60 Subpart OOOO, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart OOOO			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 77	August 16, 2012	[77 FR 49490]
Revision	Vol. 78	September 23, 2013	[78 FR 58416]
Revision	Vol. 79	December 31, 2014	[79 FR 79018]
Revision	Vol. 80	August 12, 2015	[80 FR 48262]

Subpart PPPP – [Reserved]

Subpart QQQQ – "Standards of Performance For New Residential Hydronic Heaters And Forced-Air Furnaces"

The provisions of 40 CFR Part 60 Subpart QQQQ, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart QQQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 80	March 16, 2015	[80 FR 13671]

Subpart TTTT – "Standards of Performance For Greenhouse Gas Emissions For Electric Generating Units"

The provisions of 40 CFR Part 60 Subpart TTTT, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 60 Subpart TTTT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 80	October 23, 2015	[80 FR 64509]

R. 61-62.60 History - ***South Carolina State Register:***

Vol. 23, Issue 2, (Doc. No. 2373), February 26, 1999;
Vol. 24, Issue 10, (Doc. No. 2535), October 27, 2000;
Vol. 25, Issue No. 10, (Doc. No. 2648), October 26, 2001;
Vol. 26, Issue No. 8, (Doc. No. 2736), August 23, 2002;
Vol. 27, Issue No. 6, (Doc. No. 2840), June 27, 2003;
Vol. 28, Issue No. 9, (Doc. No. 2913), September 24, 2004;
Vol. 29, Issue No. 8, (Doc. No. 2980), August 26, 2005;
Vol. 30, Issue No. 9, (Doc. No. 3066), September 22, 2006;

Vol. 31, Issue No. 6, (Doc. No. 3083), June 22, 2007;
Vol. 31, Issue No. 12, (Doc. No. 3153), December 28, 2007;
Vol. 32, Issue No. 10, (Doc. No. 3224), October 24, 2008;
Vol. 33, Issue No. 10, (Doc. No. 4082), October 23, 2009;
Vol. 34, Issue No. 5, (Doc. No. 4070), May 28, 2010;
Vol. 34, Issue No. 11, (Doc. No. 4131), November 26, 2010;
Vol. 34, Issue No. 4, (Doc. No. 4280), April 27, 2012;
Vol. 37, Issue No. 4, (Errata), April 26, 2013;
Vol. 37, Issue No. 5, (Errata), May 24, 2013;
Vol. 37, Issue No. 12, (Doc. No. 4387), December 27, 2013;
Vol. 38, Issue No. 9, (Doc. No. 4465), September 26, 2014;
Vol. 39, Issue No. 6, (Doc. No. 4481), June 26, 2015;
Vol. 39, Issue No. 11, (Doc. No. 4577), November 27, 2015.
Vol. 40, Issue No. 9, (Doc. No. 4650), September 23, 2016.

SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

REGULATION 61-62.63
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) FOR SOURCE CATEGORIES

Note: Section 112 of the Clean Air Act as amended in 1990 requires the United States Environmental Protection Agency (EPA) to issue emission standards for all major sources of the listed hazardous air pollutants (HAPs). These rules are generally known as "maximum achievable control technology" (MACT) standards. On June 26, 1995 [60 FR 32913], the EPA granted full approval to the State of South Carolina under Section 112(l)(5) and 40 CFR 63.91 of the State's program for receiving delegation of Section 112 standards that are unchanged from federal rules as promulgated. These rules are incorporated by reference by the Department and the tables are periodically revised as MACT standards are amended or promulgated. The word "Administrator" as used in these MACT standards shall mean the Department of Health and Environmental Control with the exception of the sections within these subparts that may not be delegated by the EPA.

Subpart A - "General Provisions"

The provisions of 40 Code of Federal Regulations (CFR) Part 63 Subpart A, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart A			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	March 16, 1994	[59 FR 12430]
Revision	Vol. 59	April 22, 1994	[59 FR 19453]
Revision	Vol. 59	December 6, 1994	[59 FR 62589]
Revision	Vol. 60	January 25, 1995	[60 FR 4963]
Revision	Vol. 60	June 27, 1995	[60 FR 33122]
Revision	Vol. 60	September 1, 1995	[60 FR 45980]
Revision	Vol. 61	May 21, 1996	[61 FR 25399]
Revision	Vol. 61	December 17, 1996	[61 FR 66227]
Revision	Vol. 62	December 10, 1997	[62 FR 65024]
Revision	Vol. 63	May 4, 1998	[63 FR 24444]
Revision	Vol. 63	May 13, 1998	[63 FR 26465]
Revision	Vol. 63	September 21, 1998	[63 FR 50326]
Revision	Vol. 63	October 7, 1998	[63 FR 53996]
Revision	Vol. 63	December 1, 1998	[63 FR 66061]
Revision	Vol. 64	January 28, 1999	[64 FR 4300]
Revision	Vol. 64	February 12, 1999	[64 FR 7468]
Revision	Vol. 64	April 12, 1999	[64 FR 17562]
Revision	Vol. 64	June 10, 1999	[64 FR 31375]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 67	February 14, 2002	[67 FR 6968]

40 CFR Part 63 Subpart A			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 67	February 27, 2002	[67 FR 9156]
Revision	Vol. 67	April 5, 2002	[67 FR 16582]
Revision	Vol. 67	June 10, 2002	[67 FR 39794]
Revision	Vol. 67	July 23, 2002	[67 FR 48254]
Revision	Vol. 68	February 18, 2003	[68 FR 7706]
Revision	Vol. 68	April 21, 2003	[68 FR 19375]
Revision	Vol. 68	May 6, 2003	[68 FR 23898]
Revision	Vol. 68	May 8, 2003	[68 FR 24653]
Revision	Vol. 68	May 20, 2003	[68 FR 27646]
Revision	Vol. 68	May 23, 2003	[68 FR 28606]
Revision	Vol. 68	May 27, 2003	[68 FR 28774]
Revision	Vol. 68	May 28, 2003	[68 FR 31746]
Revision	Vol. 68	May 29, 2003	[68 FR 32172]
Revision	Vol. 68	May 30, 2003	[68 FR 32586]
Revision	Vol. 68	November 13, 2003	[68 FR 64432]
Revision	Vol. 68	December 19, 2003	[68 FR 70960]
Revision	Vol. 69	January 2, 2004	[69 FR 130]
Revision	Vol. 69	February 3, 2004	[69 FR 5038]
Revision	Vol. 69	April 9, 2004	[69 FR 18801]
Revision	Vol. 69	April 19, 2004	[69 FR 20968]
Revision	Vol. 69	April 22, 2004	[69 FR 21737]
Revision	Vol. 69	April 26, 2004	[69 FR 22602]
Revision	Vol. 69	June 15, 2004	[69 FR 33474]
Revision	Vol. 69	July 30, 2004	[69 FR 45944]
Revision	Vol. 69	September 13, 2004	[69 FR 55218]
Revision	Vol. 70	April 15, 2005	[70 FR 19992]
Revision	Vol. 70	May 20, 2005	[70 FR 29400]
Revision	Vol. 70	October 12, 2005	[70 FR 59402]
Revision	Vol. 71	February 16, 2006	[71 FR 8342]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	July 28, 2006	[71 FR 42898]
Revision	Vol. 71	December 6, 2006	[71 FR 70651]
Revision	Vol. 72	January 3, 2007	[72 FR 26]
Revision	Vol. 72	January 23, 2007	[72 FR 2930]
Revision	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 72	October 29, 2007	[72 FR 61060]
Revision	Vol. 72	November 16, 2007	[72 FR 64860]
Revision	Vol. 72	December 26, 2007	[72 FR 73180]
Revision	Vol. 72	December 28, 2007	[72 FR 74088]
Revision	Vol. 73	January 2, 2008	[73 FR 226]
Revision	Vol. 73	January 9, 2008	[73 FR 1738]
Revision	Vol. 73	January 10, 2008	[73 FR 1916]
Revision	Vol. 73	January 18, 2008	[73 FR 3568]

40 CFR Part 63 Subpart A			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 73	February 7, 2008	[73 FR 7210]
Revision	Vol. 73	March 7, 2008	[73 FR 12275]
Revision	Vol. 73	July 23, 2008	[73 FR 42978]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 74	June 25, 2009	[74 FR 30366]
Revision	Vol. 74	October 28, 2009	[74 FR 55670]
Revision	Vol. 75	September 9, 2010	[75 FR 54970]
Revision	Vol. 75	September 13, 2010	[75 FR 55636]
Revision	Vol. 76	February 17, 2011	[76 FR 9450]
Revision	Vol. 77	February 16, 2012	[77 FR 9304]
Revision	Vol. 77	April 17, 2012	[77 FR 22848]
Revision	Vol. 77	September 11, 2012	[77 FR 55698]
Revision	Vol. 78	January 30, 2013	[78 FR 6674]
Revision	Vol. 78	January 31, 2013	[78 FR 7138]
Revision	Vol. 78	February 1, 2013	[78 FR 7488]
Revision	Vol. 78	June 20, 2013	[78 FR 37133]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 79	March 27, 2014	[79 FR 17340]
Revision	Vol. 80	June 30, 2015	[80 FR 37365]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]
Revision	Vol. 80	September 18, 2015	[80 FR 56699]
Revision	Vol. 80	October 15, 2015	[80 FR 62389]
Revision	Vol. 80	October 26, 2015	[80 FR 65469]
Revision	Vol. 80	December 1, 2015	[80 FR 75178]
Revision	Vol. 80	December 4, 2015	[80 FR 75817]

Subpart B - "Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j)"

Section 63.40 - Applicability.

(a) Applicability. The requirements of Sections 63.40 through 63.44 of this subpart apply to any owner or operator who constructs or reconstructs a major source of HAPs after the effective date of this subpart unless the major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to Section 112(d), Section 112(h), or Section 112(j) of the Act and incorporated in another subpart of Part 63, or the owner or operator of such major source has received all necessary air quality permits for such construction or reconstruction project before the effective date of Section 112(g)(2)(B) in the State.

(b) Exclusion for electric utility steam generating units. The requirements of this subpart do not apply to electric utility steam generating units unless and until such time as these units are added to the source category list pursuant to Section 112(c)(5) of the Act.

(c) Relationship to local requirements. Nothing in this subpart shall prevent a local agency from imposing more stringent requirements than those contained in this subpart.

(d) Exclusion for stationary sources in deleted source categories. The requirements of this subpart do not apply to stationary sources that are within a source category that has been deleted from the source category list pursuant to Section 112(c)(9) of the Act.

(e) Exclusion for research and development activities. The requirements of this subpart do not apply to research and development activities, as defined in Regulation 61-62.63, Section 63.41.

(f) Synthetic Minor Provisions. Any "affected source," as defined by Regulation 61-62.63, Section 63.41, may request to use federally enforceable permit conditions to limit the source's potential to emit and become a synthetic minor source.

(1) An affected source desiring to be a synthetic minor source shall provide a written request to the Department for a federally enforceable construction permit conditioned to constrain the operation of the source, along with a completed construction permit application package. The construction or reconstruction of the source shall not commence until the source has received an effective permit to construct.

(2) The enforceable permit conditions provisions of Regulation 61-62.1, Section II.E.3, shall apply to synthetic minor source permits.

(3) The public participation procedures of Regulation 61-62.1, Section II.N, shall apply to synthetic minor source permits.

(4) The emergency provisions of Regulation 61-62.1, Section II.L, shall apply to synthetic minor source permits.

(5) The permit application provisions of Regulation 61-62.1, Section II.E.5, shall apply to synthetic minor source permits.

Section 63.41 - Definitions.

Terms used in this subpart that are not defined below or in Regulation 61-62.1, Section I, have the meaning given to them in the Clean Air Act and in 40 CFR 63, Subpart A.

(a) "Act" means the Clean Air Act, as amended, 42 U.S.C. 7401, et seq.

(b) "Affected source" means the stationary source or group of stationary sources which, when fabricated (on site), erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in this subpart.

(c) "Affected States" are:

(1) The States of Georgia and/or North Carolina if, as determined by the Department, their air quality may be affected by a Maximum Achievable Control Technology (MACT) determination made in accordance with this subpart; or

(2) Any portions of the State of Tennessee whose air quality may be affected and that are within fifty (50) miles of the major source for which a MACT determination is made in accordance with this subpart.

(d) "Available information" means, for purposes of identifying control technology options for the affected source, information contained in the following information sources as of the date of approval of the MACT determination by the Department:

(1) A relevant proposed regulation, including all supporting information;

(2) Background information documents for a draft or proposed regulation;

(3) Data and information available from the Control Technology Center developed pursuant to Section 113 of the Act;

(4) Data and information contained in the Aerometric Informational Retrieval System, including information in the MACT database;

(5) Any additional information that can be expeditiously provided by the Administrator; and

(6) For the purpose of determinations by the Department, any additional information provided by the applicant or others, and any additional information considered available by the Department.

(e) "Construct a major source" means:

(1) To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit ten (10) tons per year (tpy) of any HAP or twenty-five (25) tpy of any combination of HAPs, or

(2) To fabricate, erect, or install at any developed site a new process or production unit which in and of itself emits or has the potential to emit ten (10) tpy of any HAP or twenty-five (25) tpy of any combination of HAPs, unless the process or production unit satisfies criteria (e)(2)(i) through (e)(2)(vi) of this paragraph:

(i) All HAPs emitted by the process or production unit that would otherwise be controlled under the requirements of this subpart will be controlled by emission control equipment which was previously installed at the same site as the process or production unit;

(ii) (A) The Department has determined within a period of five (5) years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT) or lowest achievable emission rate (LAER) under 40 CFR 51 or 52; or

(B) The Department determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (that is, equivalent to the level of control that would be provided by a current BACT or LAER);

(iii) The Department determines that the percent control efficiency for emissions of HAPs from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

(iv) The Department has provided notice and an opportunity for public comment concerning its determination that criteria in paragraphs (e)(2)(i), (e)(2)(ii), and (e)(2)(iii) of this definition apply and

concerning the continued adequacy of any prior LAER or BACT;

(v) If any commenter has asserted that a prior LAER or BACT is no longer adequate, the Department has determined that the level of control required by that prior determination remains adequate; and

(vi) Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the Department are predicated will be construed by the Department as applicable requirements under Section 504(a) of the Act and either have been incorporated into any existing Part 70 permit for the affected facility or will be incorporated into such permit upon issuance.

(f) "Control technology" means measures, processes, methods, systems, or techniques to limit the emission of HAPs including, but not limited to, measures that:

(1) Reduce the quantity of or eliminate emissions of such pollutants through process changes, substitution of materials, or other modifications;

(2) Enclose systems or processes to eliminate emissions;

(3) Collect, capture, or treat such pollutants when released from a process, stack, storage, or fugitive emissions point;

(4) Are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 U.S.C. 7412(h); or

(5) Are a combination of paragraphs (f)(1)-(f)(4) of this definition.

(g) "Effective date" in South Carolina of Section 112(g)(2)(B) of the Act is July 1, 1998.

(h) "Electric utility steam generating unit" means any fossil fuel fired combustion unit of more than twenty-five (25) megawatts (MW) that serves a generator that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its potential electric output capacity and more than twenty-five (25) MW electric output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

(i) "Greenfield site" means a contiguous area under common control that is an undeveloped site.

(j) "Hazardous Air Pollutant (HAP)" means any air pollutant defined in or pursuant to Section 112(b) of the Act.

(k) "List of Source Categories" means the Source Category List required by Section 112(c) of the Act.

(l) "Maximum achievable control technology (MACT) emission limitation for new sources" means the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the Department, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed or reconstructed major source.

(m) "Notice of MACT Approval" means a document issued by the Department containing all federally enforceable conditions necessary to enforce the application and operation of MACT or other control

technologies such that the MACT emission limitation is met.

(n) "Organic HAP" means the compounds listed in Table 1 to Subpart XX of this part.

(o) "Presumptive MACT determination" means an estimation of MACT, based on limited data gathered within a short time frame, that serves as a basis for a decision on how to develop an emission standard for a particular source category. Factors such as control technology costs, non-air quality health and environmental impacts, energy requirements, and benefits are not typically considered in the estimation.

(p) "Process or production unit" means any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

(q) "Reconstruct a major source" means the replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit ten (10) tpy of any HAP or twenty-five (25) tpy of any combination of HAPs, whenever:

(1) The fixed capital cost of the new components exceeds fifty (50) percent of the fixed capital cost that would be required to construct a comparable process or production unit; and

(2) It is technically and economically feasible for the reconstructed major source to meet the applicable MACT emission limitation for new sources established under this subpart.

(r) "Research and development activities" means activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner.

(s) "Similar source" means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source such that the source could be controlled using the same control technology.

Section 63.42 - Program Requirements Governing Construction or Reconstruction of Major Sources.

Prohibition:

After the effective date of Section 112(g)(2)(B) in the State, no person may begin actual construction or reconstruction of a major source of HAPs in the State unless:

(a) The major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to Section 112(d), Section 112(h), or Section 112(j) in 40 CFR 63, and the owner or operator has fully complied with all procedures and requirements for preconstruction review established by that standard, including any applicable requirements set forth in 40 CFR 63, Subpart A; or

(b) The Department has made a final and effective case-by-case determination pursuant to the provisions of Regulation 61-62.63, Section 63.43, such that emissions from the constructed or reconstructed major source will be controlled to a level no less stringent than the MACT emission limitation for new sources.

Section 63.43 - Maximum Achievable Control Technology (MACT) Determinations for Constructed and Reconstructed Major Sources.

(a) Applicability:

The requirements of this section apply to an owner or operator who constructs or reconstructs a major source of HAPs subject to a case-by-case determination of MACT pursuant to Regulation 61-62.63, Section 63.42.

(b) Requirements for constructed and reconstructed major sources. When a case-by-case determination of MACT is required by Regulation 61-62.63, Section 63.42, the owner or operator shall obtain from the Department an approved MACT determination according to paragraph (c) of this section.

(c) Review Process:

(1) The owner or operator shall apply for and obtain a Notice of MACT Approval according to the procedures outlined in paragraphs (f) through (h) of this section.

(2) The MACT emission limitation and requirements established shall be effective as required by paragraph (j) of this section, consistent with the principles established in paragraph (d) of this section, and supported by the information listed in paragraph (e) of this section. The owner or operator shall comply with the requirements in paragraphs (k) and (l) of this section, and with all applicable requirements in 40 CFR 63, Subpart A.

(d) Principles of MACT determinations. The following general principles shall govern preparation by the owner or operator of each permit application or other application requiring a case-by-case MACT determination concerning construction or reconstruction of a major source, and all subsequent review of and actions taken concerning such an application by the Department:

(1) The MACT emission limitation or MACT requirements recommended by the applicant and approved by the Department shall not be less stringent than the emission control which is achieved in practice by the best controlled similar source, as determined by the Department.

(2) Based upon available information, as defined in this subpart, the MACT emission limitation and control technology (including any requirements under paragraph (d)(3) of this section) recommended by the applicant and approved by the Department shall achieve the maximum degree of reduction in emissions of HAPs which can be achieved by utilizing those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.

(3) The applicant may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the Department may approve such a standard if the Department specifically determines that it is not feasible to prescribe or enforce an emission limitation under the criteria set forth in Section 112(h)(2) of the Act.

(4) If the Administrator has either proposed a relevant emission standard pursuant to Section 112(d) or Section 112(h) of the Act or adopted a presumptive MACT determination for the source category which includes the constructed or reconstructed major source, then the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.

(e) Application requirements for a case-by-case MACT determination.

(1) An application for a MACT determination (whether a permit application under Title V of the Act, an application for a Notice of MACT Approval, or other document specified by the Department under paragraph (c) of this section) shall specify a control technology selected by the owner or operator that, if properly operated and maintained, will meet the MACT emission limitation or standard as determined according to the principles set forth in paragraph (d) of this section.

(2) In each instance where a constructed or reconstructed major source would require additional control technology or a change in control technology, the application for a MACT determination shall contain the following information:

(i) The name and address (physical location) of the major source to be constructed or reconstructed;

(ii) A brief description of the major source to be constructed or reconstructed and identification of any listed source category or categories in which it is included;

(iii) The expected commencement date for the construction or reconstruction of the major source;

(iv) The expected completion date for construction or reconstruction of the major source;

(v) The anticipated date of start-up for the constructed or reconstructed major source;

(vi) The HAP emitted by the constructed or reconstructed major source, and the estimated emission rate for each such HAP, to the extent this information is needed by the Department to determine MACT;

(vii) Any federally enforceable emission limitations applicable to the constructed or reconstructed major source;

(viii) The maximum and expected utilization of capacity of the constructed or reconstructed major source, and the associated uncontrolled emission rates for that source, to the extent this information is needed by the Department to determine MACT;

(ix) The controlled emissions for the constructed or reconstructed major source in tpy at expected and maximum utilization of capacity, to the extent this information is needed by the Department to determine MACT;

(x) A recommended emission limitation for the constructed or reconstructed major source consistent with the principles set forth in paragraph (d) of this section;

(xi) The selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, estimated control efficiency of the control technology (and the manufacturer's name, address, telephone number, and relevant specifications and drawings, if requested by the Department);

(xii) Supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology; and

(xiii) Any other relevant information required pursuant to 40 CFR 63, Subpart A.

(3) In each instance where the owner or operator contends that a constructed or reconstructed major source will be in compliance, upon startup, with case-by-case MACT under this subpart without a change in control technology, the application for a MACT determination shall contain the following information:

(i) The information described in paragraphs (e)(2)(i) through (e)(2)(x) of this section; and

(ii) Documentation of the control technology in place.

(f) Administrative procedures for review of the Notice of MACT Approval.

(1) The Department will notify the owner or operator in writing, within forty-five (45) days from the date the application is first received, as to whether the application for a MACT determination is complete or whether additional information is required.

(2) The Department will initially approve the recommended MACT emission limitation and other terms set forth in the application, or the Department will notify the owner or operator in writing of its intent to disapprove the application, within thirty (30) calendar days after the owner or operator is notified in writing that the application is complete.

(3) The owner or operator may present, in writing, within sixty (60) calendar days after receipt of notice of the Department's intent to disapprove the application, additional information or arguments pertaining to, or amendments to, the application for consideration by the Department before it decides whether to finally disapprove the application.

(4) The Department will either initially approve or issue a final disapproval of the application within ninety (90) days after it notifies the owner or operator of an intent to disapprove or within thirty (30) days after the date additional information is received from the owner or operator, whichever is earlier.

(5) A final determination by the Department to disapprove any application will be in writing and will specify the grounds on which the disapproval is based. If any application is finally disapproved, the owner or operator may submit a subsequent application concerning construction or reconstruction of the same major source, provided that the subsequent application has been amended in response to the stated grounds for the prior disapproval.

(6) An initial decision to approve an application for a MACT determination will be set forth in the Notice of MACT Approval as described in paragraph (g) of this section.

(g) Notice of MACT Approval.

(1) The Notice of MACT Approval will contain a MACT emission limitation (or a MACT work practice standard if the Department determines it is not feasible to prescribe or enforce an emission standard) to control the emissions of HAPs. The MACT emission limitation or standard will be determined by the Department and will conform to the principles set forth in paragraph (d) of this section.

(2) The Notice of MACT Approval will specify any notification, operation and maintenance, performance testing, monitoring, reporting, and record keeping requirements. The Notice of MACT Approval will include:

(i) In addition to the MACT emission limitation or MACT work practice standard established under this subpart, additional emission limits, production limits, operational limits, or other terms and conditions necessary to ensure federal enforceability of the MACT emission limitation;

(ii) Compliance certifications, testing, monitoring, reporting, and record keeping requirements that are consistent with the requirements of Regulation 61-62.70.6(c);

(iii) In accordance with Section 114(a)(3) of the Act, requirements for monitoring capable of demonstrating continuous compliance during the applicable reporting period. Such monitoring data shall be of sufficient quality to be used as a basis for enforcing all applicable requirements established under this subpart, including emission limitations;

(iv) A statement requiring the owner or operator to comply with all applicable requirements contained in 40 CFR 63, Subpart A;

(3) All provisions contained in the Notice of MACT Approval shall be federally enforceable upon the effective date of issuance of such notice, as provided by paragraph (j) of this section.

(4) The Notice of MACT Approval shall expire if construction or reconstruction has not commenced within eighteen (18) months of issuance, unless the Department has granted an extension which shall not exceed an additional twelve (12) months.

(h) Opportunity for public comment on the Notice of MACT Approval.

(1) The Department will provide opportunity for public comment on the Notice of MACT Approval, including, at a minimum:

(i) Availability for public inspection in at least one location in the area affected of the information submitted by the owner or operator and of the Department's initial decision to approve the application;

(ii) A 30-day period for submittal of public comment; and

(iii) A notice by prominent advertisement in the area affected of the location of the source information and initial decision specified in paragraph (h)(1)(i) of this section.

(2) At the discretion of the Department, the Notice of MACT Approval setting forth the initial decision to approve the application may become final automatically at the end of the comment period if no adverse comments are received. If adverse comments are received, the Department will make any necessary revisions in its analysis and decide whether to finally approve the application within thirty (30) days after the end of the comment period.

(i) EPA notification. The Department will send a copy of the final Notice of MACT Approval to the Administrator through the appropriate Regional Office, and to all other state and local air pollution control agencies having jurisdiction in affected states.

(j) Effective date of MACT determination shall be the date the Notice of MACT Approval becomes final.

(k) Compliance date. On and after the date of start-up, a constructed or reconstructed major source which is subject to the requirements of this subpart shall be in compliance with all applicable

requirements specified in the MACT determination.

(l) Compliance with MACT determinations.

(1) An owner or operator of a constructed or reconstructed major source that is subject to a MACT determination shall comply with all requirements in the final Notice of MACT Approval, including but not limited to, any MACT emission limitation or MACT work practice standard and any notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements.

(2) An owner or operator of a constructed or reconstructed major source which has obtained a MACT determination shall be deemed to be in compliance with Section 112(g)(2)(B) of the Act only to the extent that the constructed or reconstructed major source is in compliance with all requirements set forth in the final Notice of MACT Approval. Any violation of such requirements by the owner or operator shall be deemed by the Department and by EPA to be a violation of the prohibition on construction or reconstruction in Section 112(g)(2)(B) for whatever period the owner or operator is determined to be in violation of such requirements, and shall subject the owner or operator to appropriate enforcement action under the Act.

(m) Reporting to the Administrator. Within sixty (60) days of the issuance of a final Notice of MACT Approval, the Department will provide a copy of such notice to the Administrator, and will provide a summary in a compatible electronic format for inclusion in the MACT database.

Section 63.44 - Requirements for Constructed or Reconstructed Major Sources Subject to a Subsequently Promulgated MACT Standard or MACT Requirement.

(a) If the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act or the Department issues a determination under Section 112(j) of the Act that is applicable to a stationary source or group of sources which would be deemed to be a constructed or reconstructed major source under this subpart before the date that the owner or operator has obtained a final and legally effective MACT determination under any of the review options available pursuant to Regulation 61-62.63, Section 63.43, the owner or operator of the source(s) shall comply with the promulgated standard or determination rather than any MACT determination under Section 112(g) by the Department, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.

(b) If the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act or the Department makes a determination under Section 112(j) of the Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this subpart and has been subject to a prior case-by-case MACT determination pursuant to Regulation 61-62.63, Section 63.43, and the owner or operator obtained a final and legally effective case-by-case MACT determination prior to the promulgation date of such emission standard, then the Department will (if the initial Part 70 permit has not yet been issued) issue an initial operating permit which incorporates the emission standard or determination, or will (if the initial Part 70 permit has been issued) revise the operating permit according to the reopening procedures in Regulation 61-62.70, or 40 CFR 70 or 71, whichever is relevant, to incorporate the emission standard or determination.

(1) The EPA may include in the emission standard established under Section 112(d) or Section 112(h) of the Act a specific compliance date for those sources which have obtained a final and legally effective MACT determination under this subpart and which have submitted the information required by Regulation 61-62.63, Section 63.43, to the Department before the close of the public comment period for the standard established under Section 112(d) of the Act. Such date shall assure that the owner or operator

shall comply with the promulgated standard as expeditiously as practicable, but not longer than eight (8) years after such standard is promulgated. In that event, the Department shall incorporate the applicable compliance date in the Part 70 operating permit.

(2) If no compliance date has been established in the promulgated 112(d) or 112(h) Standard or Section 112(j) determination, for those sources which have obtained a final and legally effective MACT determination under this subpart, then the Department shall establish a compliance date in the permit that assures that the owner or operator shall comply with the promulgated standard or determination as expeditiously as practicable, but not longer than eight (8) years after such standard is promulgated or a Section 112(j) determination is made.

(c) Notwithstanding the requirements of paragraphs (a) and (b) of this section, if the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act or the Department issues a determination under Section 112(j) of the Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this subpart and which is the subject of a prior case-by-case MACT determination pursuant to Regulation 61-62.63, Section 63.43 of this subpart, and the level of control required by the emission standard issued under Section 112(d) or Section 112(h) or the determination issued under Section 112(j) of the Act is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the Department is not required to incorporate any less stringent terms of the promulgated standard in the Part 70 operating permit applicable to such source(s) and may in its discretion consider any more stringent provisions of the prior MACT determination to be applicable legal requirements when issuing or revising such an operating permit.

Section 63.50 - Applicability.

(a) General applicability.

(1) The requirements of this section through Section 63.56 implement Section 112(j) of the Clean Air Act (as amended in 1990). The requirements of this section through Section 63.56 apply in each state beginning on the effective date of an approved Title V permit program in such state. The requirements of this section through Section 63.56 do not apply to research or laboratory activities as defined in Section 63.51.

(2) The requirements of this section through Section 63.56 apply to:

(i) The owner or operator of affected sources within a source category or subcategory under this part that are located at a major source that is subject to an approved Title V permit program and for which the Administrator has failed to promulgate emission standards by the Section 112(j) deadlines. If Title V applicability has been deferred for a source category, then Section 112(j) is not applicable for sources in that category within that state, local, or tribal jurisdiction until those sources become subject to Title V permitting requirements; and

(ii) Permitting authorities with an approved Title V permit program.

(b) Relationship to state and local requirements. Nothing in Sections 63.50 through 63.56 shall prevent a state or local regulatory agency from imposing more stringent requirements, as a matter of state or local law, than those contained in Sections 63.50 through 63.56.

(c) The procedures in Sections 63.50 through 63.56 apply for each affected source only after the Section 112(j) deadline for the source category or subcategory in question has passed, and only until such time as

a generally applicable federal standard governing that source has been promulgated under Section 112(d) or 112(h) of the Act. Once a generally applicable federal standard governing that source has been promulgated, the owner or operator of the affected source and the permitting authority are not required to take any further actions to develop an equivalent emission limitation under Section 112(j) of the Act.

(d) Any final equivalent emission limitation for an affected source which is issued by the permitting authority pursuant to Sections 63.50 through 63.56 prior to promulgation of a generally applicable federal standard governing that source under Section 112(d) or 112(h) of the Act shall be deemed an applicable federal requirement adopted pursuant to Section 112(j) of the Act. Each such equivalent emission limitation shall take effect upon issuance of the permit containing that limitation under Section 112(j)(5) of the Act, and shall remain applicable to the source until such time as it may be revised or supplanted pursuant to the procedures established by Sections 63.50 through 63.56. Such a final equivalent emission limitation, and all associated requirements adopted pursuant to Section 63.52(f)(2), are directly enforceable under federal law regardless of whether or not any permit in which they may be contained remains in effect.

Section 63.51 - Definitions.

Terms used in Sections 63.50 through 63.56 that are not defined in this section have the meaning given to them in the Act, or in Subpart A of this part.

(a) "Affected source" means the collection of equipment, activities, or both within a single contiguous area and under common control that is in a Section 112(c) source category or subcategory for which the Administrator has failed to promulgate an emission standard by the Section 112(j) deadline, and that is addressed by an applicable MACT emission limitation established pursuant to this subpart.

(b) "Available information" means, for purposes of conducting a MACT floor finding and identifying control technology options under this subpart, any information that is available as of the date on which the first Part 2 MACT application is filed for a source in the relevant source category or subcategory in the state or jurisdiction; and, pursuant to the requirements of this subpart, is additional relevant information that can be expeditiously provided by the Administrator, is submitted by the applicant or others prior to or during the public comment period on the Section 112(j) equivalent emission limitation for that source, or information contained in the information sources in paragraphs (b)(1) through (b)(5) of this definition.

(1) A relevant proposed regulation, including all supporting information.

(2) Relevant background information documents for a draft or proposed regulation.

(3) Any relevant regulation, information, or guidance collected by the Administrator establishing a MACT floor finding and/or MACT determination.

(4) Relevant data and information available from the Clean Air Technology Center developed pursuant to Section 112(l)(3) of the Act.

(5) Relevant data and information contained in the Aerometric Information Retrieval System (AIRS).

(6) Any additional information that can be expeditiously provided by the Administrator.

(7) Any information provided by applicants in an application for a permit, permit modification, administrative amendment, or Notice of MACT Approval pursuant to the requirements of this subpart.

(8) Any additional relevant information provided by the applicant.

(c) "Control technology" means measures, processes, methods, systems, or techniques to limit the emission of HAPs including, but not limited to, measures which:

(1) Reduce the quantity or eliminate emissions of such pollutants through process changes, substitution of materials, or other modifications;

(2) Enclose systems or processes to eliminate emissions;

(3) Collect, capture, or treat such pollutants when released from a process, stack, storage, or fugitive emissions point;

(4) Are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 U.S.C. 7412(h); or

(5) Are a combination of paragraphs (c)(1) through (c)(4) of this definition.

(d) "Enhanced review" means a review process containing all administrative steps needed to ensure that the terms and conditions resulting from the review process can be incorporated using Title V permitting procedures.

(e) "Equivalent emission limitation" means an emission limitation, established under Section 112(j) of the Act, which is equivalent to the MACT standard that EPA would have promulgated under Section 112(d) or Section 112 (h) of the Act.

(f) "Maximum achievable control technology (MACT) emission limitation for existing sources" means the emission limitation reflecting the maximum degree of reduction in emissions of HAPs (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reductions, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category or subcategory to which such emission standard applies. This limitation shall not be less stringent than the MACT floor.

(g) "Maximum achievable control technology (MACT) emission limitation for new sources" means the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions of HAPs (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category or subcategory to which such emission standard applies.

(h) "Maximum Achievable Control Technology (MACT) floor" means:

(1) For existing sources:

(i) The average emission limitation achieved by the best performing twelve (12) percent of the existing sources in the United States (for which the Administrator has emissions information), excluding those sources that have, within eighteen (18) months before the emission standard is proposed or within

thirty (30) months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the LAER (as defined in Section 171 of the Act) applicable to the source category and prevailing at the time, in the category or subcategory, for categories and subcategories of stationary sources with thirty (30) or more sources; or

(ii) The average emission limitation achieved by the best performing five (5) sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory, for categories or subcategories with fewer than thirty (30) sources;

(2) For new sources, the emission limitation achieved in practice by the best controlled similar source.

(i) "New affected source" means the collection of equipment, activities, or both, that if constructed after the issuance of a Section 112(j) permit for the source pursuant to Section 63.52, is subject to the applicable MACT emission limitation for new sources. Each permit must define the term "new affected source," which will be the same as the "affected source" unless a different collection is warranted based on consideration of factors including:

(1) Emission reduction impacts of controlling individual sources versus groups of sources;

(2) Cost effectiveness of controlling individual equipment;

(3) Flexibility to accommodate common control strategies;

(4) Cost/benefits of emissions averaging;

(5) Incentives for pollution prevention;

(6) Feasibility and cost of controlling processes that share common equipment (for example, product recovery devices);

(7) Feasibility and cost of monitoring; and

(8) Other relevant factors.

(j) "Permitting authority" means the permitting authority as defined in Part 70 of this chapter.

(k) "Research or laboratory activities" means activities whose primary purpose is to conduct research and development into new processes and products where such activities are operated under the close supervision of technically trained personnel and are not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner; and where the source is not in a source category, specifically addressing research or laboratory activities, that is listed pursuant to Section 112(c)(7) of the Act.

(l) "Section 112(j) deadline" means the date eighteen (18) months after the date for which a relevant standard is scheduled to be promulgated under this part, except that for all major sources listed in the source category schedule for which a relevant standard is scheduled to be promulgated by November 15, 1994, the Section 112(j) deadline is November 15, 1996, and for all major sources listed in the source category schedule for which a relevant standard is scheduled to be promulgated by November 15, 1997, the Section 112(j) deadline is December 15, 1999.

(m) “Similar source” means that equipment or collection of equipment that, by virtue of its structure, operability, type of emissions, and volume and concentration of emissions, is substantially equivalent to the new affected source and employs control technology for control of emissions of HAPs that is practical for use on the new affected source.

(n) “Source category schedule for standards” means the schedule for promulgating MACT standards issued pursuant to Section 112(e) of the Act.

Section 63.52 - Approval Process for New and Existing Affected Sources.

(a) Sources subject to Section 112(j) as of the Section 112(j) deadline. The requirements of paragraphs (a)(1) and (a)(2) of this section apply to major sources that include, as of the Section 112(j) deadline, one or more sources in a category or subcategory for which the Administrator has failed to promulgate an emission standard under this part on or before an applicable Section 112(j) deadline. Existing source MACT requirements (including relevant compliance deadlines), as specified in a Title V permit issued to the source pursuant to the requirements of the subpart, must apply to such sources.

(1) The owner or operator must submit an application for a Title V permit or for a revision to an existing Title V permit or a pending Title V permit meeting the requirements of Section 63.53(a) by the Section 112(j) deadline if the owner or operator can reasonably determine that one or more sources at the major source belong in the category or subcategory subject to Section 112(j).

(2) If an application was not submitted under paragraph (a)(1) of this section and if notified by the permitting authority, the owner or operator must submit an application for a Title V permit or for a revision to an existing Title V permit or a pending Title V permit meeting the requirements of Section 63.53(a) within thirty (30) days after being notified in writing by the permitting authority that one or more sources at the major source belong to such category or subcategory. Permitting authorities are not required to make such notification.

(3) The requirements in paragraphs (a)(3)(i) through (a)(3)(ii) of this section apply when the owner or operator has obtained a Title V permit that incorporates a case-by-case MACT determination by the permitting authority under Section 112(g) or has submitted a Title V permit application for a revision that incorporates a case-by-case MACT determination under Section 112(g), but has not submitted an application for a Title V permit revision that addresses the emission limitation requirements of Section 112(j).

(i) When the owner or operator has a Title V permit that incorporates a case-by-case MACT determination by the permitting authority under Section 112(g), the owner or operator must submit an application meeting the requirements of Section 63.53(a) for a Title V permit revision within thirty (30) days of the Section 112(j) deadline or within thirty (30) days of being notified in writing by the permitting authority that one or more sources at the major source belong in such category or subcategory. Using the procedures established in paragraph (e) of this section, the permitting authority must determine whether the emission limitations adopted pursuant to the prior case-by-case MACT determination under Section 112(g) are substantially as effective as the emission limitations which the permitting authority would otherwise adopt pursuant to Section 112(j) for the source in question. If the permitting authority determines that the emission limitations previously adopted to effectuate Section 112(g) are substantially as effective as the emission limitations which the permitting authority would otherwise adopt to effectuate Section 112(j) for the source, then the permitting authority must retain the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j). The Title V permit applicable to that source must be revised accordingly. If the permitting authority does not retain the existing emission

limitations in the permit as the emission limitations to effectuate Section 112(j), the MACT requirements of this subpart are satisfied upon issuance of a revised Title V permit incorporating any additional Section 112(j) requirements.

(ii) When the owner or operator has submitted a Title V permit application that incorporates a case-by-case MACT determination by the permitting authority under Section 112(g), but has not received the permit incorporating the Section 112(g) requirements, the owner or operator must continue to pursue a Title V permit that addresses the emission limitation requirements of Section 112(g). Within thirty (30) days of issuance of that Title V permit, the owner or operator must submit an application meeting the requirements of Section 63.53(a) for a change to the existing Title V permit. Using the procedures established in paragraph (e) of this section, the permitting authority must determine whether the emission limitations adopted pursuant to the prior case-by-case MACT determination under Section 112(g) are substantially as effective as the emission limitations which the permitting authority would otherwise adopt pursuant to Section 112(j) for the source in question. If the permitting authority determines that the emission limitations previously adopted to effectuate Section 112(g) are substantially as effective as the emission limitations which the permitting authority would otherwise adopt to effectuate Section 112(j) for the source, then the permitting authority must retain the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j). The Title V permit applicable to that source must be revised accordingly. If the permitting authority does not retain the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j), the MACT requirements of this subpart are satisfied upon issuance of a revised Title V permit incorporating any additional Section 112(j) requirements.

(b) Sources that become subject to Section 112(j) after the Section 112(j) deadline and that do not have a Title V permit addressing Section 112(j) requirements. The requirements of paragraphs (b)(1) through (b)(4) of this section apply to sources that do not meet the criteria in paragraph (a) of this section on the Section 112(j) deadline and are, therefore, not subject to Section 112(j) on that date, but where events occur subsequent to the Section 112(j) deadline that would bring the source under the requirements of this subpart, and the source does not have a Title V permit that addresses the requirements of Section 112(j).

(1) When one (1) or more sources in a category or subcategory subject to the requirements of this subpart are installed at a major source, or result in the source becoming a major source due to the installation, and the installation does not invoke Section 112(g) requirements, the owner or operator must submit an application meeting the requirements of Section 63.53(a) within thirty (30) days of startup of the source. This application shall be reviewed using the procedures established in paragraph (e) of this section. Existing source MACT requirements (including relevant compliance deadlines), as specified in a Title V permit issued pursuant to the requirements of this subpart, shall apply to such sources.

(2) The requirements in this paragraph apply when one or more sources in a category or subcategory subject to this subpart are installed at a major source, or result in the source becoming a major source due to the installation, and the installation does require emission limitations to be established and permitted under Section 112(g), and the owner or operator has not submitted an application for a Title V permit revision that addresses the emission limitation requirements of Section 112(j). In this case, the owner or operator must apply for and obtain a Title V permit that addresses the emission limitation requirements of Section 112(g). Within thirty (30) days of issuance of that Title V permit, the owner or operator must submit an application meeting the requirements of Section 63.53(a) for a revision to the existing Title V permit. Using the procedures established in paragraph (e) of this section, the permitting authority must determine whether the emission limitations adopted pursuant to the prior case-by-case MACT determination under Section 112(g) are substantially as effective as the emission limitations which the permitting authority would otherwise adopt pursuant to Section 112(j) for the source in question. If the permitting authority determines that the emission limitations previously

adopted to effectuate Section 112(g) are substantially as effective as the emission limitations which the permitting authority would otherwise adopt to effectuate Section 112(j) for the source, then the permitting authority must retain the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j). The Title V permit applicable to that source must be revised accordingly. If the permitting authority does not retain the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j), the MACT requirements of this subpart are satisfied upon issuance of a revised Title V permit incorporating any additional Section 112(j) requirements.

(3) The owner or operator of an area source that, due to a relaxation in any federally enforceable emission limitation (such as a restriction on hours of operation), increases its potential to emit HAPs such that the source becomes a major source that is subject to this subpart, must submit an application meeting the requirements of Section 63.53(a) for a Title V permit or for an application for a Title V permit revision within thirty (30) days after the date that such source becomes a major source. This application must be reviewed using the procedures established in paragraph (e) of this section. Existing source MACT requirements (including relevant compliance deadlines), as specified in a Title V permit issued pursuant to the requirements of this subpart, must apply to such sources.

(4) On or after April 5, 2002, if the Administrator establishes a lesser quantity emission rate under Section 112(a)(1) of the Act that results in an area source becoming a major source that is subject to this subpart, then the owner or operator of such a major source must submit an application meeting the requirements of Section 63.53(a) for a Title V permit or for a change to an existing Title V permit or pending Title V permit on or before the date six (6) months after the date that such source becomes a major source. Existing source MACT requirements (including relevant compliance deadlines), as specified in a Title V permit issued pursuant to the requirements of this subpart, shall apply to such sources.

(c) Sources that have a Title V permit addressing Section 112(j) requirements. The requirements of paragraphs (c)(1) and (c)(2) of this section apply to major sources that include one or more sources in a category or subcategory for which the Administrator fails to promulgate an emission standard under this part on or before an applicable Section 112(j) deadline, and the owner or operator has a permit meeting the Section 112(j) requirements, and where changes occur at the major source to equipment, activities, or both, subsequent to the Section 112(j) deadline.

(1) If the Title V permit already provides the appropriate requirements that address the events that occur under paragraph (c) of this section subsequent to the Section 112(j) deadline, then the source must comply with the applicable new source MACT or existing source MACT requirements as specified in the permit, and the Section 112(j) requirements are thus satisfied.

(2) If the Title V permit does not contain the appropriate requirements that address the events that occur under paragraph (c) of this section subsequent to the Section 112(j) deadline, then the owner or operator must submit an application for a revision to the existing Title V permit that meets the requirements of Section 63.53(a). The application must be submitted within thirty (30) days of beginning construction and must be reviewed using the procedures established in paragraph (e) of this section. Existing source MACT requirements (including relevant compliance deadlines), as specified in a Title V permit issued pursuant to the requirements of this subpart, shall apply to such sources.

(d) Requests for applicability determination or notice of MACT approval.

(1) An owner or operator who is unsure of whether one or more sources at a major source belong in a category or subcategory for which the Administrator has failed to promulgate an emission standard under this part may, on or before an applicable Section 112(j) deadline, request an applicability

determination from the permitting authority by submitting an application meeting the requirements of Section 63.53(a) by the applicable deadlines specified in paragraphs (a), (b), or (c) of this section.

(2) In addition to meeting the requirements of paragraphs (a), (b), and (c) of this section, the owner or operator of a new affected source may submit an application for a Notice of MACT Approval before construction, pursuant to Section 63.54.

(e) Permit application review.

(1) Each owner or operator who is required to submit to the permitting authority a Part 1 MACT application which meets the requirements of Section 63.53(a) for one or more sources in a category or subcategory subject to Section 112(j) must also submit to the permitting authority a timely Part 2 MACT application for the same sources which meets the requirements of Section 63.53(b). Each owner or operator shall submit the Part 2 MACT application for the sources in a particular category or subcategory no later than the applicable date specified in Table 1 to this subpart. The submission date specified in Table 1 to this subpart for Miscellaneous Organic Chemical Manufacturing shall apply to sources in each of the source categories listed in Table 2 to this subpart. When the owner or operator is required by Sections 63.50 through 63.56 to submit an application meeting the requirements of Section 63.53(a) by a date which is after the date for a Part 2 MACT application for sources in the category or subcategory in question established by Table 1 to this subpart, the owner or operator shall submit a Part 2 MACT application meeting the requirements of Section 63.53(b) within sixty (60) additional days after the applicable deadline for submission of the Part 1 MACT application. Part 2 MACT applications must be reviewed by the permitting authority according to procedures established in Section 63.55. The resulting MACT determination must be incorporated into the source's Title V permit according to procedures established under Title V, and any other regulations approved under Title V in the jurisdiction in which the affected source is located.

(2) Notwithstanding paragraph (e)(1) of this section, the owner or operator may request either an applicability determination or an equivalency determination by the permitting authority as provided in paragraphs (e)(2)(i) and (e)(2)(ii) of this section.

(i) Each owner or operator who submitted a request for an applicability determination pursuant to paragraph (d)(1) of this section on or before May 15, 2002, which remains pending before the permitting authority on May 30, 2003, and who still wishes to obtain such a determination, must resubmit that request by July 29, 2003, or by the date which is sixty (60) days after the Administrator publishes in the Federal Register a proposed standard under Section 112(d) or 112(h) of the Act for the category or subcategory in question, whichever is later. Each request for an applicability determination which is resubmitted under this paragraph (e)(2)(i) must be supplemented to discuss the relation between the source(s) in question and the applicability provision in the proposed standard for the category or subcategory in question, and to explain why there may still be uncertainties that require a determination of applicability. The permitting authority must take action upon each properly resubmitted and supplemented request for an applicability determination within an additional sixty (60) days after the applicable deadline for the resubmitted request. If the applicability determination is positive, the owner or operator must submit a Part 2 MACT application meeting the requirements of Section 63.53(b) by the date specified for the category or subcategory in question in Table 1 to this subpart. If the applicability determination is negative, then no further action by the owner or operator is necessary.

(ii) As specified in paragraphs (a) and (b) of this section, an owner or operator who has submitted an application meeting the requirements of Section 63.53(a) may request a determination by the permitting authority of whether emission limitations adopted pursuant to a prior case-by-case MACT determination under Section 112(g) that apply to one or more sources at a major source in a relevant

category or subcategory are substantially as effective as the emission limitations which the permitting authority would otherwise adopt pursuant to Section 112(j) for the source in question. Such a request must be submitted by the date for the category or subcategory in question specified in Table 1 to this subpart. Any owner or operator who previously submitted such a request under a prior version of this paragraph (e)(2)(ii) need not resubmit the request. Each request for an equivalency determination under this paragraph (e)(2)(ii), regardless of when it was submitted, will be construed in the alternative as a complete application for an equivalent emission limitation under Section 112(j). The process for determination by the permitting authority of whether the emission limitations in the prior case-by-case MACT determination are substantially as effective as the emission limitations which the permitting authority would otherwise adopt under Section 112(j) must include the opportunity for full public, EPA, and affected state review prior to a final determination. If the permitting authority determines that the emission limitations in the prior case-by-case MACT determination are substantially as effective as the emission limitations which the permitting authority would otherwise adopt under Section 112(j), then the permitting authority must adopt the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j) for the source in question. If more than three (3) years remain on the current Title V permit, the owner or operator must submit an application for a Title V permit revision to make any conforming changes in the permit required to adopt the existing emission limitations as the Section 112(j) MACT emission limitations. If less than three (3) years remain on the current Title V permit, any required conforming changes must be made when the permit is renewed. If the permitting authority determines that the emission limitations in the prior case-by-case MACT determination under Section 112(g) are not substantially as effective as the emission limitations which the permitting authority would otherwise adopt for the source in question under Section 112(j), the permitting authority must make a new MACT determination and adopt a Title V permit incorporating an appropriate equivalent emission limitation under Section 112(j). Such a determination constitutes final action for purposes of judicial review under 40 CFR 70.4(b)(3)(x) and corresponding state Title V program provisions.

(3) Within sixty (60) days of submittal of the Part 2 MACT application, the permitting authority must notify the owner or operator in writing whether the application is complete or incomplete. The Part 2 MACT application shall be deemed complete on the date it was submitted unless the permitting authority notifies the owner or operator in writing within sixty (60) days of the submittal that the Part 2 MACT application is incomplete. A Part 2 MACT application is complete if it is sufficient to begin processing the application for a Title V permit addressing Section 112(j) requirements. In the event that the permitting authority disapproves a permit application or determines that the application is incomplete, the owner or operator must revise and resubmit the application to meet the objections of the permitting authority. The permitting authority must specify a reasonable period in which the owner or operator is required to remedy the deficiencies in the disapproved or incomplete application. This period may not exceed six (6) months from the date the owner or operator is first notified that the application has been disapproved or is incomplete.

(4) Following submittal of a Part 1 or Part 2 MACT application, the permitting authority may request additional information from the owner or operator. The owner or operator must respond to such requests in a timely manner.

(5) If the owner or operator has submitted a timely and complete application as required by this section, any failure to have a Title V permit addressing Section 112(j) requirements shall not be a violation of Section 112(j), unless the delay in final action is due to the failure of the applicant to submit, in a timely manner, information required or requested to process the application. Once a complete application is submitted, the owner or operator shall not be in violation of the requirement to have a Title V permit addressing Section 112(j) requirements.

(f) Permit content. The Title V permit must contain an equivalent emission limitation (or limitations) for the relevant category or subcategory determined on a case-by-case basis by the permitting authority, or, if the applicable criteria in Subpart D of this part are met, the Title V permit may contain an alternative emission limitation. For the purposes of the preceding sentence, early reductions made pursuant to Section 112(i)(5)(A) of the Act must be achieved not later than the date on which the relevant standard should have been promulgated according to the source category schedule for standards.

(1) The Title V permit must contain an emission standard or emission limitation that is equivalent to existing source MACT and an emission standard or emission limitation that is equivalent to new source MACT for control of emissions of HAPs. The MACT emission standards or limitations must be determined by the permitting authority and must be based on the degree of emission reductions that can be achieved if the control technologies or work practices are installed, maintained, and operated properly. The permit must also specify the affected source and the new affected source. If construction of a new affected source or reconstruction of an affected source commences after a Title V permit meeting the requirements of Section 112(j) has been issued for the source, the new source MACT compliance dates must apply.

(2) The Title V permit must specify any notification, operation and maintenance, performance testing, monitoring, and reporting and recordkeeping requirements. In developing the Title V permit, the permitting authority must consider and specify the appropriate provisions of Subpart A of this part. The Title V permit must also include the information in paragraphs (f)(2)(i) through (f)(2)(iii) of this section.

(i) In addition to the MACT emission limitation required by paragraph (f)(1) of this section, additional emission limits, production limits, operational limits, or other terms and conditions necessary to ensure practicable enforceability of the MACT emission limitation.

(ii) Compliance certifications, testing, monitoring, reporting, and recordkeeping requirements that are consistent with requirements established pursuant to Title V and paragraph (h) of this section.

(iii) Compliance dates by which the owner or operator must be in compliance with the MACT emission limitation and all other applicable terms and conditions of the permit.

(A) The owner or operator of an affected source subject to the requirements of this subpart must comply with the emission limitation(s) by the date established in the source's Title V permit. In no case shall such compliance date be later than three (3) years after the issuance of the permit for that source, except where the permitting authority issues a permit that grants an additional year to comply in accordance with Section 112(i)(3)(B) of the Act, or unless otherwise specified in Section 112(i), or in Subpart D of this part.

(B) The owner or operator of a new affected source, as defined in the Title V permit meeting the requirements of Section 112(j), that is subject to the requirements of this subpart must comply with a new source MACT level of control immediately upon startup of the new affected source.

(g) Permit issuance dates. The permitting authority must issue a Title V permit meeting Section 112(j) requirements within eighteen (18) months after submittal of the complete Part 2 MACT application.

(h) Enhanced monitoring. In accordance with Section 114(a)(3) of the Act, monitoring shall be capable of demonstrating continuous compliance for each compliance period during the applicable reporting period. Such monitoring data shall be of sufficient quality to be used as a basis for directly enforcing all applicable requirements established under this subpart, including emission limitations.

(i) MACT emission limitations.

(1) The owner or operator of affected sources subject to paragraphs (a), (b), and (c) of this section must comply with all requirements of this subpart that are applicable to affected sources, including the compliance date for affected sources established in paragraph (f)(2)(iii)(A) of this section.

(2) The owner or operator of new affected sources subject to paragraph (c)(1) of this section must comply with all requirements of this subpart that are applicable to new affected sources, including the compliance date for new affected sources established in paragraph (f)(2)(iii)(B) of this section.

Section 63.53 - Application Content for Case-by-Case MACT Determinations.

(a) Part 1 MACT application. The Part 1 application for a MACT determination must contain the information in paragraphs (a)(1) through (a)(4) of this section.

(1) The name and address (physical location) of the major source.

(2) A brief description of the major source and an identification of the relevant source category.

(3) An identification of the types of emission points belonging to the relevant source category.

(4) An identification of any affected sources for which a Section 112(g) MACT determination has been made.

(b) Part 2 MACT application.

(1) In compiling a Part 2 MACT application, the owner or operator may cross-reference specific information in any prior submission by the owner or operator to the permitting authority, but in cross-referencing such information the owner or operator may not presume favorable action on any prior application or request which is still pending. In compiling a Part 2 MACT application, the owner or operator may also cross-reference any part of a standard proposed by the Administrator pursuant to Section 112(d) or 112(h) of the Act for any category or subcategory which includes sources to which the Part 2 application applies.

(2) The Part 2 application for a MACT determination must contain the information in paragraphs (b)(2)(i) through (b)(2)(v) of this section.

(i) For a new affected source, the anticipated date of startup of operation.

(ii) Each emission point or group of emission points at the affected source which is part of a category or subcategory for which a Part 2 MACT application is required, and each of the HAPs emitted at those emission points. When the Administrator has proposed a standard pursuant to Section 112(d) or 112(h) of the Act for a category or subcategory, such information may be limited to those emission points and HAPs which would be subject to control under the proposed standard.

(iii) Any existing federal, state, or local limitations or requirements governing emissions of HAPs from those emission points which are part of a category or subcategory for which a Part 2 application is required.

(iv) For each identified emission point or group of affected emission points, an identification of

control technology in place.

(v) Any additional emission data or other information specifically requested by the permitting authority.

(3) The Part 2 application for a MACT determination may, but is not required to, contain the following information:

(i) Recommended emission limitations for the affected source and support information consistent with Section 63.52(f). The owner or operator may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation.

(ii) A description of the control technologies that would be applied to meet the emission limitation including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied.

(iii) Relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.

Section 63.54 - Preconstruction Review Procedures for New Affected Sources.

The requirements of this section apply to an owner or operator who constructs a new affected source subject to Section 63.52(c)(1). The purpose of this section is to describe alternative review processes that the permitting authority may use to make a MACT determination for the new affected source.

(a) Review process for new affected sources.

(1) If the permitting authority requires an owner or operator to obtain or revise a Title V permit before construction of the new affected source, or when the owner or operator chooses to obtain or revise a Title V permit before construction, the owner or operator must follow the procedures established under the applicable Title V permit program before construction of the new affected source.

(2) If an owner or operator is not required to obtain or revise a Title V permit before construction of the new affected source (and has not elected to do so), but the new affected source is covered by any preconstruction or preoperation review requirements established pursuant to Section 112(g) of the Act, then the owner or operator must comply with those requirements in order to ensure that the requirements of Section 112(j) and 112(g) are satisfied. If the new affected source is not covered by Section 112(g), the permitting authority, in its discretion, may issue a Notice of MACT Approval, or the equivalent, in accordance with the procedures set forth in paragraphs (b) through (f) of this section, or an equivalent permit review process, before construction or operation of the new affected source.

(3) Regardless of the review process, the MACT determination shall be consistent with the principles established in Section 63.55. The application for a Notice of MACT Approval or a Title V permit, permit modification, or administrative amendment, whichever is applicable, shall include the documentation required by Section 63.53.

(b) Optional administrative procedures for preconstruction or preoperation review for new affected sources. The permitting authority may provide for an enhanced review of Section 112(j) MACT determinations for review procedures and compliance requirements equivalent to those set forth in paragraphs (b) through (f) of this section.

(1) The permitting authority will notify the owner or operator in writing as to whether the application for a MACT determination is complete or whether additional information is required.

(2) The permitting authority will approve an applicant's proposed control technology, or the permitting authority will notify the owner or operator in writing of its intention to disapprove a control technology.

(3) The owner or operator may present in writing, within a time frame specified by the permitting authority, additional information, considerations, or amendments to the application before the permitting authority's issuance of a final disapproval.

(4) The permitting authority will issue a preliminary approval or issue a disapproval of the application, taking into account additional information received from the owner or operator.

(5) A determination to disapprove any application will be in writing and will specify the grounds on which the disapproval is based.

(6) Approval of an applicant’s proposed control technology must be set forth in a Notice of MACT Approval (or the equivalent) as described in Section 63.52(f).

(c) Opportunity for public comment on Notice of MACT Approval. The permitting authority will provide opportunity for public comment on the preliminary Notice of MACT Approval prior to issuance, including, at a minimum:

(1) Availability for public inspection in at least one location in the area affected of the information submitted by the owner or operator and of the permitting authority's tentative determination;

(2) A period for submittal of public comment of at least thirty (30) days; and

(3) A notice by prominent advertisement in the area affected of the location of the source information and analysis specified in Section 63.52(f). The form and content of the notice must be substantially equivalent to that found in Section 70.7 of this chapter.

(4) An opportunity for a public hearing, if one is requested. The permitting authority will give at

least thirty (30) days notice in advance of any hearing.

(d) Review by the EPA and affected states. The permitting authority must send copies of the preliminary notice (in time for comment) and final notice required by paragraph (c) of this section to the Administrator through the appropriate Regional Office, and to all other state and local air pollution control agencies having jurisdiction in affected states. The permitting authority must provide EPA with a review period for the final notice of at least forty-five (45) days and shall not issue a final Notice of MACT Approval until EPA objections are satisfied.

(e) Compliance with MACT determinations. An owner or operator of a major source that is subject to a MACT determination must comply with notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements established under Section 63.52(h), under Title V, and at the discretion of the permitting authority, under Subpart A of this part. The permitting authority must provide the EPA with the opportunity to review compliance requirements for consistency with requirements established pursuant to Title V during the review period under paragraph (d) of this section.

(f) Equivalency under Section 112(l). If a permitting authority requires preconstruction review for new source MACT determinations under this subpart, such requirement shall not necessitate a determination under Subpart E of this part.

Section 63.55 - Maximum Achievable Control Technology (MACT) Determinations for Affected Sources

Subject to Case-by-Case Determination of Equivalent Emission Limitations.

(a) Requirements for permitting authorities. The permitting authority must determine whether the Section 63.53(a) Part 1 and Section 63.53(b) Part 2 MACT application is complete or an application for a Notice of MACT Approval is approvable. In either case, when the application is complete or approvable, the permitting authority must establish HAP emissions limitations equivalent to the limitations that would apply if an emission standard had been issued in a timely manner under Section 112(d) or 112(h) of the Act. The permitting authority must establish these emissions limitations consistent with the following requirements and principles:

(1) Emission limitations must be established for the equipment and activities within the affected sources within a source category or subcategory for which the Section 112(j) deadline has passed.

(2) Each emission limitation for an existing affected source must reflect the maximum degree of reduction in emissions of HAPs (including a prohibition on such emissions, where achievable) that the permitting authority, taking into consideration the cost of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements, determines is achievable by affected sources in the category or subcategory for which the Section 112(j) deadline has passed. This limitation must not be less

stringent than the MACT floor which must be established by the permitting authority according to the requirements of Section 112(d)(3)(A) and 112(d)(3)(B) and must be based upon available information.

(3) Each emission limitation for a new affected source must reflect the maximum degree of reduction in emissions of HAPs (including a prohibition on such emissions, where achievable) that the permitting authority, taking into consideration the cost of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements, determines is achievable. This limitation must not be less stringent than the emission limitation achieved in practice by the best controlled similar source which must be established by the permitting authority according to the requirements of Section 112(d)(3). This limitation must be based upon available information.

(4) The permitting authority must select a specific design, equipment, work practice, or operational standard, or combination thereof, when it is not feasible to prescribe or enforce an equivalent emission limitation due to the nature of the process or pollutant. It is not feasible to prescribe or enforce a limitation when the Administrator determines that HAPs cannot be emitted through a conveyance designed and constructed to capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any federal, state, or local law, or the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

(5) Nothing in this subpart shall prevent a state or local permitting authority from establishing an emission limitation more stringent than required by federal regulations.

(b) Reporting to EPA. The owner or operator must submit additional copies of its Part 1 and Part 2 MACT application for a Title V permit, permit revision, or Notice of MACT Approval, whichever is applicable, to the EPA at the same time the material is submitted to the permitting authority.

Section 63.56 - Requirements for Case-by-Case Determination of Equivalent Emission Limitations After Promulgation of Subsequent MACT Standard.

(a) If the Administrator promulgates a relevant emission standard that is applicable to one or more affected sources within a major source before the date a permit application under this paragraph (a) is approved, the Title V permit must contain the promulgated standard rather than the emission limitation determined under Section 63.52, and the owner or operator must comply with the promulgated standard by the compliance date in the promulgated standard.

(b) If the Administrator promulgates a relevant emission standard under Section 112(d) or 112(h) of the Act that is applicable to a source after the date a permit is issued pursuant to Section 63.52 or Section 63.54, the permitting authority must incorporate requirements of that standard in the Title V permit upon its next renewal. The permitting authority must establish a compliance date in the revised permit that assures that the owner or operator must comply with the promulgated standard within a reasonable time, but not longer than eight (8) years after such standard is promulgated or eight (8) years after the date by which the owner or operator was first required to comply with the emission limitation established by the permit, whichever is earlier. However, in no event shall the period for compliance for existing sources be shorter than that provided for existing sources in the promulgated standard.

(c) Notwithstanding the requirements of paragraph (a) or (b) of this section, the requirements of paragraphs (c)(1) and (c)(2) of this section shall apply.

(1) If the Administrator promulgates an emission standard under Section 112(d) or 112(h) that is applicable to an affected source after the date a permit application under this paragraph is approved under Section 63.52 or Section 63.54, the permitting authority is not required to change the emission limitation in the permit to reflect the promulgated standard if the permitting authority determines that the level of control required by the emission limitation in the permit is substantially as effective as that required by the promulgated standard pursuant to Section 63.1(e).

(2) If the Administrator promulgates an emission standard under Section 112(d) or 112(h) of the Act that is applicable to an affected source after the date a permit application is approved under Section 63.52 or Section 63.54, and the level of control required by the promulgated standard is less stringent than the level of control required by any emission limitation in the prior MACT determination, the permitting authority is not required to incorporate any less stringent emission limitation of the promulgated standard in the Title V permit and may in its discretion consider any more stringent provisions of the MACT determination to be applicable legal requirements when issuing or revising such a Title V permit.

TABLE 1 TO SUBPART B OF PART 63—
SECTION 112(J) PART 2 APPLICATION DUE DATES

Due date	MACT standard
10/30/03	Combustion Turbines. Lime Manufacturing. Site Remediation. Iron and Steel Foundries. Taconite Iron Ore Processing. Miscellaneous Organic Chemical. Manufacturing (MON).[1] Organic Liquids Distribution. Primary Magnesium Refining. Metal Can (Surface Coating). Plastic Parts and Products (Surface Coating). Chlorine Production. Miscellaneous Metal Parts and Products (Surface Coating) (and Asphalt/Coal Tar Application-Metal Pipes).[2]
4/28/04	Industrial Boilers, Institutional/Commercial Boilers, and Process Heaters.[3] Plywood and Composite Wood Products. Reciprocating Internal Combustion Engines.[4] Auto and Light-Duty Truck (Surface Coating).
11/14/05	Industrial Boilers, Institutional/Commercial Boilers, and Process Heaters.[5] Hydrochloric Acid Production.[6]

[1] Covers 23 source categories, see Table 2 to this subpart.

[2] Two source categories.
[3] Includes all sources in the three categories, Industrial Boilers, Institutional/Commercial Boilers, and Process Heaters that burn no hazardous waste.
[4] Includes engines greater than 500 brake horsepower.
[5] Includes all sources in the three categories, Industrial Boilers, Institutional/Commercial Boilers, and Process Heaters that burn hazardous waste.
[6] Includes furnaces that produce acid from hazardous waste at sources in the category Hydrochloric Acid Production.

TABLE 2 TO SUBPART B OF PART 63— NON SOURCE CATEGORIES
Manufacture of Paints, Coatings, and Adhesives.
Alkyd Resins Production.
Maleic Anhydride Copolymers Production.
Polyester Resins Production.
Polymerized Vinylidene Chloride Production.
Polymethyl Methacrylate Resins Production.
Polyvinyl Acetate Emulsions Production.
Polyvinyl Alcohol Production.
Polyvinyl Butyral Production.
Ammonium Sulfate Production-Caprolactam By-Product Plants.
Quaternary Ammonium Compounds Production.
Benzyltrimethylammonium Chloride Production.
Carbonyl Sulfide Production.
Chelating Agents Production.
Chlorinated Paraffins Production.
Ethylidene Norbornene Production.
Explosives Production.
Hydrazine Production.
OBPA/1,3-Diisocyanate Production.
Photographic Chemicals Production.
Phthalate Plasticizers Production.
Rubber Chemicals Manufacturing.
Symmetrical Tetrachloropyridine Production.

Subpart C - "List of Hazardous Air Pollutants, Petition Process, Lesser Quantity Designations, Source Category List"

The provisions of 40 CFR Part 63 Subpart C, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart C			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	June 18, 1996	[61 FR 30816]
Revision	Vol. 65	August 2, 2000	[65 FR 37342]
Revision	Vol. 69	November 29, 2004	[69 FR 69320]
Revision	Vol. 70	December 19, 2005	[70 FR 75047]

Subpart D - "Regulations Governing Compliance Extensions for Early Reduction of Hazardous Air Pollutants"

The provisions of 40 CFR Part 63 Subpart D, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart D			
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Original Promulgation	Vol. 57	December 29, 1992	[57 FR 61970]
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Revision	Vol. 58	October 27, 1993	[58 FR 57911]
Revision	Vol. 58	November 29, 1993	[58 FR 62539]
Revision	Vol. 59	October 21, 1994	[59 FR 53109]
Revision	Vol. 59	November 21, 1994	[59 FR 59921]

Subpart E - "Approval of State Programs and Delegation of Federal Authorities"

The provisions of 40 CFR Part 63 Subpart E, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart E			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	February 17, 2004	[69 FR 7372]
Revision	Vol. 70	October 13, 2005	[70 FR 59848]
Revision	Vol. 72	May 16, 2007	[72 FR 27437]

Subpart F - "National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry"

The provisions of 40 CFR Part 63 Subpart F, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart F			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	April 22, 1994	[59 FR 19402]
Revision	Vol. 59	September 20, 1994	[59 FR 48175]
Revision	Vol. 59	October 24, 1994	[59 FR 53359]
Revision	Vol. 59	October 28, 1994	[59 FR 54131]
Revision	Vol. 60	January 27, 1995	[60 FR 5321]
Revision	Vol. 60	April 10, 1995	[60 FR 18020]
Revision	Vol. 60	April 10, 1995	[60 FR 18026]
Revision	Vol. 60	December 12, 1995	[60 FR 63624]
Revision	Vol. 61	February 29, 1996	[61 FR 7716]
Revision	Vol. 61	June 20, 1996	[61 FR 31435]

40 CFR Part 63 Subpart F			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 61	December 5, 1996	[61 FR 64572]
Revision	Vol. 62	January 17, 1997	[62 FR 2722]
Revision	Vol. 63	May 12, 1998	[63 FR 26078]
Revision	Vol. 64	April 26, 1999	[64 FR 20189]
Revision	Vol. 65	May 8, 2000	[65 FR 26491]
Revision	Vol. 66	January 22, 2001	[66 FR 6922]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	December 21, 2006	[71 FR 76603]

Subpart G - "National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater"

The provisions of 40 CFR Part 63 Subpart G, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart G			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	April 22, 1994	[59 FR 19402]
Revision	Vol. 59	June 6, 1994	[59 FR 29196]
Revision	Vol. 59	October 24, 1994	[59 FR 53359]
Revision	Vol. 60	January 27, 1995	[60 FR 5321]
Revision	Vol. 60	April 10, 1995	[60 FR 18020]
Revision	Vol. 60	April 10, 1995	[60 FR 18026]
Revision	Vol. 60	December 12, 1995	[60 FR 63624]
Revision	Vol. 61	February 29, 1996	[61 FR 7716]
Revision	Vol. 61	December 5, 1996	[61 FR 64572]
Revision	Vol. 62	January 17, 1997	[62 FR 2722]
Revision	Vol. 63	December 9, 1998	[63 FR 67787]
Revision	Vol. 64	April 26, 1999	[64 FR 20189]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]
Revision	Vol. 66	January 22, 2001	[66 FR 6922]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 69	December 23, 2004	[69 FR 76859]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	December 21, 2006	[71 FR 76603]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart H - "National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks"

The provisions of 40 CFR Part 63 Subpart H, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart H			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	April 22, 1994	[59 FR 19402]
Revision	Vol. 59	September 20, 1994	[59 FR 48175]
Revision	Vol. 59	October 24, 1994	[59 FR 53359]
Revision	Vol. 60	January 27, 1995	[60 FR 5321]
Revision	Vol. 60	April 10, 1995	[60 FR 18020]
Revision	Vol. 60	April 10, 1995	[60 FR 18026]
Revision	Vol. 60	December 12, 1995	[60 FR 63624]
Revision	Vol. 61	June 20, 1996	[61 FR 31435]
Revision	Vol. 62	January 17, 1997	[62 FR 2722]
Revision	Vol. 64	April 26, 1999	[64 FR 20189]
Revision	Vol. 65	December 14, 2000	[65 FR 78268]
Revision	Vol. 66	January 22, 2001	[66 FR 6922]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart I - "National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks"

The provisions of 40 CFR Part 63 Subpart I, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart I			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	April 22, 1994	[59 FR 19402]
Revision	Vol. 59	September 20, 1994	[59 FR 48175]
Revision	Vol. 59	October 24, 1994	[59 FR 53359]
Revision	Vol. 59	October 28, 1994	[59 FR 54131]
Revision	Vol. 60	January 27, 1995	[60 FR 5321]
Revision	Vol. 60	April 10, 1995	[60 FR 18020]
Revision	Vol. 60	April 10, 1995	[60 FR 18026]
Revision	Vol. 61	February 29, 1996	[61 FR 7716]
Revision	Vol. 61	June 20, 1996	[61 FR 31435]
Revision	Vol. 62	January 17, 1997	[62 FR 2722]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart J - "National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production"

The provisions of 40 CFR Part 63 Subpart J, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart J			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	July 10, 2002	[67 FR 45866]

Subpart K - [Reserved]

Subpart L - "National Emission Standards for Coke Oven Batteries"

The provisions of 40 CFR Part 63 Subpart L, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart L			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 58	October 27, 1993	[58 FR 57911]
Revision	Vol. 59	January 13, 1994	[59 FR 1992]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	April 15, 2005	[70 FR 19992]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart M - "National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities"

The provisions of 40 CFR Part 63 Subpart M, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart M			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 58	September 22, 1993	[58 FR 49354]
Revision	Vol. 58	December 20, 1993	[58 FR 66287]
Revision	Vol. 61	June 3, 1996	[61 FR 27785]
Revision	Vol. 61	June 11, 1996	[61 FR 29485]
Revision	Vol. 61	September 19, 1996	[61 FR 49263]
Revision	Vol. 64	December 14, 1999	[64 FR 69637]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	December 19, 2005	[70 FR 75320]
Revision	Vol. 71	July 27, 2006	[71 FR 42724]
Revision	Vol. 71	September 21, 2006	[71 FR 55280]
Revision	Vol. 73	April 1, 2008	[73 FR 17252]
Revision	Vol. 73	July 11, 2008	[73 FR 39871]

Subpart N - "National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks"

The provisions of 40 CFR Part 63 Subpart N, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart N			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	January 25, 1995	[60 FR 4948]
Revision	Vol. 60	May 24, 1995	[60 FR 27598]
Revision	Vol. 60	June 27, 1995	[60 FR 33122]
Revision	Vol. 61	June 3, 1996	[61 FR 27785]
Revision	Vol. 62	January 30, 1997	[62 FR 4463]
Revision	Vol. 64	December 14, 1999	[64 FR 69637]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 69	July 19, 2004	[69 FR 42885]
Revision	Vol. 70	December 19, 2005	[70 FR 75320]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 77	September 19, 2012	[77 FR 58220]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 80	April 21, 2015	[80 FR 22116]

Subpart O - "Ethylene Oxide Emission Standards for Sterilization Facilities"

The provisions of 40 CFR Part 63 Subpart O, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart O			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	December 6, 1994	[59 FR 62585]
Revision	Vol. 61	June 3, 1996	[61 FR 27785]
Revision	Vol. 62	December 9, 1997	[62 FR 64736]
Revision	Vol. 63	December 4, 1998	[63 FR 66990]
Revision	Vol. 64	December 14, 1999	[64 FR 69637]
Revision	Vol. 66	November 2, 2001	[66 FR 55577]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	December 19, 2005	[70 FR 75320]
Revision	Vol. 71	April 7, 2006	[71 FR 17712]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart P - [Reserved]

Subpart Q - "National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers"

The provisions of 40 CFR Part 63 Subpart Q, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart Q			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	September 8, 1994	[59 FR 46350]
Revision	Vol. 63	July 23, 1998	[63 FR 39519]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 69	April 9, 2004	[69 FR 18801]
Revision	Vol. 71	April 7, 2006	[71 FR 17729]

Subpart R - "National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)"

The provisions of 40 CFR Part 63 Subpart R, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart R			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	December 14, 1994	[59 FR 64303]
Revision	Vol. 60	February 8, 1995	[60 FR 7627]
Revision	Vol. 60	June 26, 1995	[60 FR 32912]
Revision	Vol. 60	August 18, 1995	[60 FR 43244]
Revision	Vol. 60	December 8, 1995	[60 FR 62991]
Revision	Vol. 61	February 29, 1996	[61 FR 7718]
Revision	Vol. 62	February 28, 1997	[62 FR 9087]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 68	December 19, 2003	[68 FR 70960]
Revision	Vol. 71	April 6, 2006	[71 FR 17352]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart S - "National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry"

The provisions of 40 CFR Part 63 Subpart S, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart S			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 63	April 15, 1998	[63 FR 18504]
Revision	Vol. 63	August 7, 1998	[63 FR 42238]
Revision	Vol. 63	September 16, 1998	[63 FR 49455]
Revision	Vol. 63	December 28, 1998	[63 FR 71385]
Revision	Vol. 64	April 12, 1999	[64 FR 17555]

40 CFR Part 63 Subpart S			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 65	December 22, 2000	[65 FR 80755]
Revision	Vol. 66	May 14, 2001	[66 FR 24268]
Revision	Vol. 66	October 16, 2001	[66 FR 52537]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 77	September 11, 2012	[77 FR 55698]

Subpart T - "National Emission Standards for Halogenated Solvent Cleaning"

The provisions of 40 CFR Part 63 Subpart T, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart T			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	December 2, 1994	[59 FR 61801]
Revision	Vol. 59	December 30, 1994	[59 FR 67750]
Revision	Vol. 60	June 5, 1995	[60 FR 29484]
Revision	Vol. 63	May 5, 1998	[63 FR 24749]
Revision	Vol. 63	December 11, 1998	[63 FR 68397]
Revision	Vol. 64	July 13, 1999	[64 FR 37683]
Revision	Vol. 64	August 19, 1999	[64 FR 45187]
Revision	Vol. 64	October 18, 1999	[64 FR 56173]
Revision	Vol. 64	December 3, 1999	[64 FR 67793]
Revision	Vol. 64	December 14, 1999	[64 FR 69637]
Revision	Vol. 65	September 8, 2000	[65 FR 54419]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	December 19, 2005	[70 FR 75320]
Revision	Vol. 72	May 3, 2007	[72 FR 25138]

Subpart U - "National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins"

The provisions of 40 CFR Part 63 Subpart U, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart U			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	September 5, 1996	[61 FR 46924]
Revision	Vol. 62	January 14, 1997	[62 FR 1837]
Revision	Vol. 62	March 17, 1997	[62 FR 12549]
Revision	Vol. 62	July 15, 1997	[62 FR 37722]
Revision	Vol. 64	March 9, 1999	[64 FR 11542]
Revision	Vol. 64	May 7, 1999	[64 FR 24511]
Revision	Vol. 64	June 30, 1999	[64 FR 35028]

40 CFR Part 63 Subpart U			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 65	June 19, 2000	[65 FR 38030]
Revision	Vol. 66	July 16, 2001	[66 FR 36924]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 76	April 21, 2011	[76 FR 22566]

Subpart V - [Reserved]

Subpart W - "National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production"

The provisions of 40 CFR Part 63 Subpart W, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart W			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	March 8, 1995	[60 FR 12676]
Revision	Vol. 65	May 8, 2000	[65 FR 26491]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart X - "National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting"

The provisions of 40 CFR Part 63 Subpart X, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart X			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	June 23, 1995	[60 FR 32587]
Revision	Vol. 61	June 3, 1996	[61 FR 27785]
Revision	Vol. 61	December 12, 1996	[61 FR 65334]
Revision	Vol. 62	June 13, 1997	[62 FR 32210]
Revision	Vol. 63	August 24, 1998	[63 FR 45007]
Revision	Vol. 64	January 29, 1999	[64 FR 4570]
Revision	Vol. 64	December 14, 1999	[64 FR 69637]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	December 19, 2005	[70 FR 75320]
Revision	Vol. 77	January 5, 2012	[77 FR 556]
Revision	Vol. 79	January 3, 2014	[79 FR 367]

Subpart Y - "National Emission Standards for Marine Tank Vessel Loading Operations"

The provisions of 40 CFR Part 63 Subpart Y, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart Y			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	September 19, 1995	[60 FR 48388]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 76	April 21, 2011	[76 FR 22566]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 80	December 1, 2015	[80 FR 75178]

Subpart Z - [Reserved]

Subpart AA - "National Emission Standards for Hazardous Air Pollutants from Phosphoric Acid Manufacturing Plants"

The provisions of 40 CFR Part 63 Subpart AA, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart AA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 10, 1999	[64 FR 31376]
Revision	Vol. 66	December 17, 2001	[66 FR 65072]
Revision	Vol. 67	June 12, 2002	[67 FR 40578]
Revision	Vol. 67	June 13, 2002	[67 FR 40814]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart BB - "National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizer Production Plants"

The provisions of 40 CFR Part 63 Subpart BB, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart BB			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 10, 1999	[64 FR 31382]
Revision	Vol. 66	December 17, 2001	[66 FR 65072]
Revision	Vol. 67	June 13, 2002	[67 FR 40814]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	August 19, 2015	[80 FR 50385]

Subpart CC - "National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries"

The provisions of 40 CFR Part 63 Subpart CC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart CC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	August 18, 1995	[60 FR 43260]
Revision	Vol. 60	September 27, 1995	[60 FR 49976]
Revision	Vol. 61	February 23, 1996	[61 FR 7051]
Revision	Vol. 61	June 12, 1996	[61 FR 29878]
Revision	Vol. 61	June 28, 1996	[61 FR 33799]
Revision	Vol. 62	February 21, 1997	[62 FR 7938]
Revision	Vol. 63	March 20, 1998	[63 FR 13537]
Revision	Vol. 63	May 18, 1998	[63 FR 27212]
Revision	Vol. 63	June 9, 1998	[63 FR 31361]
Revision	Vol. 63	August 18, 1998	[63 FR 44140]
Revision	Vol. 65	May 8, 2000	[65 FR 26491]
Revision	Vol. 65	July 6, 2000	[65 FR 41594]
Revision	Vol. 66	May 25, 2001	[66 FR 28840]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 74	October 28, 2009	[74 FR 55670]
Revision	Vol. 75	June 30, 2010	[75 FR 37730]
Revision	Vol. 76	July 18, 2011	[76 FR 42052]
Revision	Vol. 78	June 20, 2013	[78 FR 37133]
Revision	Vol. 80	December 1, 2015	[80 FR 75178]

Subpart DD - "National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations"

The provisions of 40 CFR Part 63 Subpart DD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart DD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	July 1, 1996	[61 FR 34140]
Revision	Vol. 64	July 20, 1999	[64 FR 38950]
Revision	Vol. 66	January 8, 2001	[66 FR 1263]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	March 18, 2015	[80 FR 14247]

Subpart EE - "National Emission Standards for Magnetic Tape Manufacturing Operations"

The provisions of 40 CFR Part 63 Subpart EE, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart EE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 59	December 15, 1994	[59 FR 64596]
Revision	Vol. 64	April 9, 1999	[64 FR 17464]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart FF - [Reserved]

Subpart GG - "National Emission Standards for Aerospace Manufacturing and Rework Facilities"

The provisions of 40 CFR Part 63 Subpart GG, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart GG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	September 1, 1995	[60 FR 45956]
Revision	Vol. 61	February 9, 1996	[61 FR 4903]
Revision	Vol. 61	December 17, 1996	[61 FR 66227]
Revision	Vol. 63	March 27, 1998	[63 FR 15006]
Revision	Vol. 63	September 1, 1998	[63 FR 46526]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 65	December 8, 2000	[65 FR 76941]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 80	December 7, 2015	[80 FR 76151]

Subpart HH - "National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities"

The provisions of 40 CFR Part 63 Subpart HH, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart HH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 17, 1999	[64 FR 32628]
Revisions	Vol. 66	June 29, 2001	[66 FR 34548]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

40 CFR Part 63 Subpart HH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 72	January 3, 2007	[72 FR 26]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 77	August 16, 2012	[77 FR 49490]

Subpart II - "National Emission Standards for Shipbuilding and Ship Repair (Surface Coating)"

The provisions of 40 CFR Part 63 Subpart II, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart II			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	December 15, 1995	[60 FR 64330]
Revision	Vol. 61	June 18, 1996	[61 FR 30814]
Revision	Vol. 61	December 17, 1996	[61 FR 66226]
Revision	Vol. 65	October 17, 2000	[65 FR 61744]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	December 29, 2006	[71 FR 78392]
Revision	Vol. 72	February 27, 2007	[72 FR 8630]
Revision	Vol. 76	November 21, 2011	[76 FR 72050]

Subpart JJ - "National Emission Standards for Wood Furniture Manufacturing Operations"

The provisions of 40 CFR Part 63 Subpart JJ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart JJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 60	December 7, 1995	[60 FR 62930]
Revision	Vol. 62	June 3, 1997	[62 FR 30257]
Revision	Vol. 62	June 9, 1997	[62 FR 31361]
Revision	Vol. 63	December 28, 1998	[63 FR 71376]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 76	November 21, 2011	[76 FR 72050]

Subpart KK - "National Emission Standards for the Printing and Publishing Industry"

The provisions of 40 CFR Part 63 Subpart KK, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart KK			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	May 30, 1996	[61 FR 27132]

Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	May 24, 2006	[71 FR 29792]
Revision	Vol. 76	April 21, 2011	[76 FR 22566]

Subpart LL - "National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants"

The provisions of 40 CFR Part 63 Subpart LL, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart LL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 62	October 7, 1997	[62 FR 52407]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	November 2, 2005	[70 FR 66280]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	October 15, 2015	[80 FR 62389]

Subpart MM - "National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills"

The provisions of 40 CFR Part 63 Subpart MM, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart MM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 66	January 12, 2001	[66 FR 3180]
Revision	Vol. 66	March 26, 2001	[66 FR 16400]
Revision	Vol. 66	July 19, 2001	[66 FR 37591]
Revision	Vol. 66	August 6, 2001	[66 FR 41086]
Revision	Vol. 68	February 18, 2003	[68 FR 7706]
Revision	Vol. 68	May 8, 2003	[68 FR 24653]
Revision	Vol. 68	July 18, 2003	[68 FR 42603]
Revision	Vol. 68	December 5, 2003	[68 FR 67953]
Revision	Vol. 69	May 6, 2004	[69 FR 25321]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart NN – "National Emissions Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing at Area Sources"

The provisions of 40 CFR Part 63 Subpart NN, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart NN			
Federal Register Citation	**Volume**	**Date**	**Notice**

40 CFR Part 63 Subpart NN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 80	July 29, 2015	[80 FR 45279]

Subpart OO - "National Emission Standards for Tanks - Level 1"

The provisions of 40 CFR Part 63 Subpart OO, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart OO			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	July 1, 1996	[61 FR 34184]
Revision	Vol. 64	July 20, 1999	[64 FR 38985]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart PP - "National Emission Standards for Containers"

The provisions of 40 CFR Part 63 Subpart PP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart PP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	July 1, 1996	[61 FR 34186]
Revision	Vol. 64	July 20, 1999	[64 FR 38987]
Revision	Vol. 66	January 8, 2001	[66 FR 1263]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart QQ - "National Emission Standards for Surface Impoundments"

The provisions of 40 CFR Part 63 Subpart QQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart QQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	July 1, 1996	[61 FR 34190]
Revision	Vol. 64	July 20, 1999	[64 FR 38988]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart RR - "National Emission Standards for Individual Drain Systems"

The provisions of 40 CFR Part 63 Subpart RR, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart RR

Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 61	July 1, 1996	[61 FR 34193]
Revision	Vol. 64	July 20, 1999	[64 FR 38989]
Revision	Vol. 66	January 8, 2001	[66 FR 1263]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart SS - "National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process"

The provisions of 40 CFR Part 63 Subpart SS, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart SS			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 29, 1999	[64 FR 34854]
Revision	Vol. 64	November 22, 1999	[64 FR 63702]
Revision	Vol. 67	July 12, 2002	[67 FR 46258]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart TT - "National Emission Standards for Equipment Leaks - Control Level 1"

The provisions of 40 CFR Part 63 Subpart TT, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart TT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 29, 1999	[64 FR 34854]
Revision	Vol. 64	November 22, 1999	[64 FR 63702]
Revision	Vol. 67	July 12, 2002	[67 FR 46258]

Subpart UU - "National Emission Standards for Equipment Leaks - Control Level 2 Standards"

The provisions of 40 CFR Part 63 Subpart UU, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart UU			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 29, 1999	[64 FR 34854]
Revision	Vol. 64	November 22, 1999	[64 FR 63702]
Revision	Vol. 67	July 12, 2002	[67 FR 46258]

Subpart VV - "National Emission Standards for Oil-Water Separators and Organic-Water Separators"

The provisions of 40 CFR Part 63 Subpart VV, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart VV			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	July 1, 1996	[61 FR 34195]
Revision	Vol. 64	July 20, 1999	[64 FR 38991]
Revision	Vol. 66	January 8, 2001	[66 FR 1263]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

Subpart WW - "National Emission Standards for Storage Vessels (Tanks) - Control Level 2"

The provisions of 40 CFR Part 63 Subpart WW, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart WW			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 29, 1999	[64 FR 34854]
Revision	Vol. 67	July 12, 2002	[67 FR 46258]

Subpart XX - "National Emission Standards for Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations"

The provisions of 40 CFR Part 63 Subpart XX, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart XX			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	July 12, 2002	[67 FR 46258]
Revision	Vol. 70	April 13, 2005	[70 FR 19266]

Subpart YY - "National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards"

The provisions of 40 CFR Part 63 Subpart YY, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart YY			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 29, 1999	[64 FR 34854]
Revision	Vol. 64	November 22, 1999	[64 FR 63695]
Revision	Vol. 64	December 22, 1999	[64 FR 71852]
Revision	Vol. 66	November 2, 2001	[66 FR 55844]
Revision	Vol. 67	June 7, 2002	[67 FR 39301]

40 CFR Part 63 Subpart YY			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 67	July 12, 2002	[67 FR 46258, 46289]
Revision	Vol. 68	February 10, 2003	[68 FR 6635]
Revision	Vol. 70	April 13, 2005	[70 FR 19266]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 72	June 29, 2007	[72 FR 35663]
Revision	Vol. 79	October 8, 2014	[79 FR 60898]

Subpart ZZ - [Reserved]

Subpart AAA - [Reserved]

Subpart BBB - [Reserved]

Subpart CCC - "National Emission Standards for Hazardous Air Pollutants for Steel Pickling-HCl Process Facilities and Hydrochloric Acid Regeneration Plants"

The provisions of 40 CFR Part 63 Subpart CCC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart CCC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 22, 1999	[64 FR 33218]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 77	September 19, 2012	[77 FR 58220]

Subpart DDD - "National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production"

The provisions of 40 CFR Part 63 Subpart DDD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart DDD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 1, 1999	[64 FR 29503]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 76	December 1, 2011	[76 FR 74708]
Revision	Vol. 80	July 29, 2015	[80 FR 45279]

Subpart EEE - "National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors"

The provisions of 40 CFR Part 63 Subpart EEE, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart EEE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 63	June 19, 1998	[63 FR 33820]
Revision	Vol. 64	September 30, 1999	[64 FR 52828]
Revision	Vol. 64	November 19, 1999	[64 FR 63209]
Revision	Vol. 65	July 10, 2000	[65 FR 42292]
Revision	Vol. 65	November 9, 2000	[65 FR 67268]
Revision	Vol. 66	May 14, 2001	[66 FR 24270]
Revision	Vol. 66	July 3, 2001	[66 FR 35087]
Revision	Vol. 66	October 15, 2001	[66 FR 52361]
Revision	Vol. 66	December 6, 2001	[66 FR 63313]
Revision	Vol. 67	February 13, 2002	[67 FR 6792]
Revision	Vol. 67	February 14, 2002	[67 FR 6968]
Revision	Vol. 67	December 19, 2002	[67 FR 77687]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 69	April 9, 2004	[69 FR 18801]
Revision	Vol. 70	June 14, 2005	[70 FR 34538]
Revision	Vol. 70	October 12, 2005	[70 FR 59402]
Revision	Vol. 70	December 19, 2005	[70 FR 75042]
Revision	Vol. 71	March 23, 2006	[71 FR 14655]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	October 25, 2006	[71 FR 62388]
Revision	Vol. 73	April 8, 2008	[73 FR 18970]
Revision	Vol. 73	October 28, 2008	[73 FR 64068]

Subpart FFF - [Reserved]

Subpart GGG - "National Emission Standards for Pharmaceuticals Production"

The provisions of 40 CFR Part 63 Subpart GGG, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart GGG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 63	September 21, 1998	[63 FR 50280]
Revision	Vol. 65	August 29, 2000	[65 FR 52588]
Revision	Vol. 66	August 2, 2001	[66 FR 40121]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 70	May 13, 2005	[70 FR 25671]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

40 CFR Part 63 Subpart GGG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 76	April 21, 2011	[76 FR 22566]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart HHH - "National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities"

The provisions of 40 CFR Part 63 Subpart HHH, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart HHH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 17, 1999	[64 FR 32647]
Revision	Vol. 66	June 29, 2001	[66 FR 34548]
Revision	Vol. 66	September 27, 2001	[66 FR 49299]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 77	August 16, 2012	[77 FR 49490]

Subpart III - "National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production"

The provisions of 40 CFR Part 63 Subpart III, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart III			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 63	October 7, 1998	[63 FR 53996]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 79	August 15, 2014	[79 FR 48073]

Subpart JJJ - "National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins"

The provisions of 40 CFR Part 63 Subpart JJJ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart JJJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 61	September 12, 1996	[61 FR 48208]
Revision	Vol. 61	October 18, 1996	[61 FR 54342]
Revision	Vol. 62	January 14, 1997	[62 FR 1835]

40 CFR Part 63 Subpart JJJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 62	June 6, 1997	[62 FR 30993]
Revision	Vol. 62	July 15, 1997	[62 FR 37720]
Revision	Vol. 63	February 27, 1998	[63 FR 9944]
Revision	Vol. 63	March 31, 1998	[63 FR 15312]
Revision	Vol. 64	March 9, 1999	[64 FR 11536]
Revision	Vol. 64	June 8, 1999	[64 FR 30406]
Revision	Vol. 64	June 30, 1999	[64 FR 35023]
Revision	Vol. 65	June 19, 2000	[65 FR 38030]
Revision	Vol. 65	August 29, 2000	[65 FR 52319]
Revision	Vol. 65	October 26, 2000	[65 FR 64161]
Revision	Vol. 66	February 23, 2001	[66 FR 11233]
Revision	Vol. 66	February 26, 2001	[66 FR 11543]
Revision	Vol. 66	July 16, 2001	[66 FR 36924]
Revision	Vol. 66	August 6, 2001	[66 FR 40903]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 69	June 2, 2004	[69 FR 31008]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 79	March 27, 2014	[79 FR 17340]

Subpart KKK - [Reserved]

Subpart LLL - "National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry"

The provisions of 40 CFR Part 63 Subpart LLL, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart LLL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 14, 1999	[64 FR 31898]
Revision	Vol. 64	September 30, 1999	[64 FR 52828]
Revision	Vol. 67	April 5, 2002	[67 FR 16614]
Revision	Vol. 67	December 6, 2002	[67 FR 72580]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	December 20, 2006	[71 FR 76518]
Revision	Vol. 75	September 9, 2010	[75 FR 54970]
Revision	Vol. 76	January 18, 2011	[76 FR 2832]
Revision	Vol. 78	February 12, 2013	[78 FR 10006]
Revision	Vol. 80	July 27, 2015	[80 FR 44771]
Revision	Vol. 80	September 11, 2015	[80 FR 54728]

Subpart MMM - "National Emission Standards for Hazardous Air Pollutants for Pesticide Active

Ingredient Production"

The provisions of 40 CFR Part 63 Subpart MMM, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart MMM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 23, 1999	[64 FR 33550]
Revision	Vol. 66	November 21, 2001	[66 FR 58393, 58396]
Revision	Vol. 67	March 22, 2002	[67 FR 13508, 13514]
Revision	Vol. 67	May 1, 2002	[67 FR 21579]
Revision	Vol. 67	June 3, 2002	[67 FR 38200]
Revision	Vol. 67	September 20, 2002	[67 FR 59336]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 79	March 27, 2014	[79 FR 17340]

Subpart NNN - "National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing"

The provisions of 40 CFR Part 63 Subpart NNN, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart NNN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 14, 1999	[64 FR 31695]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	July 29, 2015	[80 FR 45279]

Subpart OOO - "National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins"

The provisions of 40 CFR Part 63 Subpart OOO, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart OOO			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 65	January 20, 2000	[65 FR 3276]
Revision	Vol. 65	February 22, 2000	[65 FR 8768]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 79	October 8, 2014	[79 FR 60898]

Subpart PPP - "National Emission Standards for Hazardous Air Pollutant Emissions for Polyether

Polyols Production"

The provisions of 40 CFR Part 63 Subpart PPP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart PPP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 1, 1999	[64 FR 29420]
Revision	Vol. 64	June 14, 1999	[64 FR 31895]
Revision	Vol. 65	May 8, 2000	[65 FR 26491]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 69	July 1, 2004	[69 FR 39862]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 79	March 27, 2014	[79 FR 17340]

Subpart QQQ - "National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting"

The provisions of 40 CFR Part 63 Subpart QQQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart QQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	June 12, 2002	[67 FR 40478]
Revision	Vol. 70	July 14, 2005	[70 FR 40672]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart RRR - "National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production"

The provisions of 40 CFR Part 63 Subpart RRR, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart RRR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 65	March 23, 2000	[65 FR 15690]
Revision	Vol. 67	June 14, 2002	[67 FR 41118]
Revision	Vol. 67	August 13, 2002	[67 FR 52616]
Revision	Vol. 67	September 24, 2002	[67 FR 59787]
Revision	Vol. 67	November 8, 2002	[67 FR 68038]
Revision	Vol. 67	December 30, 2002	[67 FR 79808]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]

40 CFR Part 63 Subpart RRR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 69	September 3, 2004	[69 FR 53980]
Revision	Vol. 70	October 3, 2005	[70 FR 57513]
Revision	Vol. 70	December 19, 2005	[70 FR 75320]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]
Revision	Vol. 80	September 18, 2015	[80 FR 56699]

Subpart SSS - [Reserved]

Subpart TTT - "National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting"

The provisions of 40 CFR Part 63 Subpart TTT, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart TTT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	June 4, 1999	[64 FR 30204]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 76	November 15, 2011	[76 FR 70834]

Subpart UUU - "National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units"

The provisions of 40 CFR Part 63 Subpart UUU, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart UUU			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	April 11, 2002	[67 FR 17762]
Revision	Vol. 69	April 9, 2004	[69 FR 18801]
Revision	Vol. 70	February 9, 2005	[70 FR 6930]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	December 1, 2015	[80 FR 75178]

Subpart VVV - "National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works"

The provisions of 40 CFR Part 63 Subpart VVV, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart VVV			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	October 26, 1999	[64 FR 57572]
Revision	Vol. 66	March 23, 2001	[66 FR 16140]
Revision	Vol. 67	October 10, 2002	[67 FR 64742]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart WWW - [Reserved]

Subpart XXX - "National Emission Standards for Hazardous Air Pollutants for Ferroalloys Production: Ferromanganese and Silicomanganese"

The provisions of 40 CFR Part 63 Subpart XXX, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart XXX			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 64	May 20, 1999	[64 FR 27458]
Revision	Vol. 66	March 22, 2001	[66 FR 16007]
Revision	Vol. 68	June 23, 2003	[68 FR 37334]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 80	June 30, 2015	[80 FR 37365]

Subpart YYY - [Reserved]

Subpart ZZZ - [Reserved]

Subpart AAAA - "National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills"

The provisions of 40 CFR Part 63 Subpart AAAA, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart AAAA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	January 16, 2003	[68 FR 2227]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart BBBB - [Reserved]

Subpart CCCC - "National Emission Standards for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast"

The provisions of 40 CFR Part 63 Subpart CCCC, as originally published in the Federal Register and as

subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart CCCC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 66	May 21, 2001	[66 FR 27876]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart DDDD - "National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products"

The provisions of 40 CFR Part 63 Subpart DDDD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart DDDD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	July 30, 2004	[69 FR 45944]
Revision	Vol. 71	February 16, 2006	[71 FR 8347]
Revision	Vol. 72	October 29, 2007	[72 FR 61060]

Subpart EEEE - "National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)"

The provisions of 40 CFR Part 63 Subpart EEEE, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart EEEE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	February 3, 2004	[69 FR 5038]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	July 28, 2006	[71 FR 42898]
Revision	Vol. 73	April 23, 2008	[73 FR 21825]
Revision	Vol. 73	July 17, 2008	[73 FR 40977]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart FFFF - "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing"

The provisions of 40 CFR Part 63 Subpart FFFF, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart FFFF

Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 68	November 10, 2003	[68 FR 63852]
Revision	Vol. 70	July 1, 2005	[70 FR 38554]
Revision	Vol. 70	August 30, 2005	[70 FR 51269]
Revision	Vol. 71	March 1, 2006	[71 FR 10439]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	July 14, 2006	[71 FR 40316]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart GGGG - "National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production"

The provisions of 40 CFR Part 63 Subpart GGGG, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart GGGG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 66	April 12, 2001	[66 FR 19006]
Revision	Vol. 67	April 5, 2002	[67 FR 16317]
Revision	Vol. 69	September 1, 2004	[69 FR 53338]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart HHHH - "National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production"

The provisions of 40 CFR Part 63 Subpart HHHH, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart HHHH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	April 11, 2002	[67 FR 17824]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart IIII - "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks"

The provisions of 40 CFR Part 63 Subpart IIII, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart IIII			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	April 26, 2004	[69 FR 22602]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	December 22, 2006	[71 FR 76922]

40 CFR Part 63 Subpart IIII			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 72	April 24, 2007	[72 FR 20227]

Subpart JJJJ - "National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating"

The provisions of 40 CFR Part 63 Subpart JJJJ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart JJJJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	December 4, 2002	[67 FR 72330]
Revision	Vol. 71	May 24, 2006	[71 FR 29792]

Subpart KKKK - "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans"

The provisions of 40 CFR Part 63 Subpart KKKK, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart KKKK			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	November 12, 2003	[68 FR 64432]
Revision	Vol. 71	January 6, 2006	[71 FR 1378]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart LLLL - [Reserved]

Subpart MMMM - "National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products"

The provisions of 40 CFR Part 63 Subpart MMMM, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart MMMM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	January 2, 2004	[69 FR 130]
Revision	Vol. 69	April 26, 2004	[69 FR 22602]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	December 22, 2006	[71 FR 76922]

Subpart NNNN - "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances"

The provisions of 40 CFR Part 63 Subpart NNNN, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart NNNN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	July 23, 2002	[67 FR 48254]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart OOOO - "National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles"

The provisions of 40 CFR Part 63 Subpart OOOO, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart OOOO			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	May 29, 2003	[68 FR 32172]
Revision	Vol. 69	August 4, 2004	[69 FR 47001]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	May 24, 2006	[71 FR 29792]

Subpart PPPP - "National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products"

The provisions of 40 CFR Part 63 Subpart PPPP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart PPPP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	April 19, 2004	[69 FR 20968]
Revision	Vol. 69	April 26, 2004	[69 FR 22602]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	December 22, 2006	[71 FR 76922]
Revision	Vol. 72	April 24, 2007	[72 FR 20227]

Subpart QQQQ - "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products"

The provisions of 40 CFR Part 63 Subpart QQQQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart QQQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	May 28, 2003	[68 FR 31746]

40 CFR Part 63 Subpart QQQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart RRRR - "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture"

The provisions of 40 CFR Part 63 Subpart RRRR, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart RRRR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	May 23, 2003	[68 FR 28606]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart SSSS - "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil"

The provisions of 40 CFR Part 63 Subpart SSSS, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart SSSS			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	June 10, 2002	[67 FR 39794]
Revision	Vol. 68	March 17, 2003	[68 FR 12590]

Subpart TTTT - "National Emission Standards for Hazardous Air Pollutants for Leather Finishing Operations"

The provisions of 40 CFR Part 63 Subpart TTTT, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart TTTT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	February 27, 2002	[67 FR 9156]
Revision	Vol. 70	February 7, 2005	[70 FR 6355]

Subpart UUUU - "National Emission Standards for Hazardous Air Pollutants for Cellulose Products Manufacturing"

The provisions of 40 CFR Part 63 Subpart UUUU, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart UUUU

Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 67	June 11, 2002	[67 FR 40044]
Revision	Vol. 70	June 24, 2005	[70 FR 36523]
Revision	Vol. 70	August 10, 2005	[70 FR 46684]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart VVVV - "National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing"

The provisions of 40 CFR Part 63 Subpart VVVV, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart VVVV			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 66	August 22, 2001	[66 FR 44218]
Revision	Vol. 66	October 3, 2001	[66 FR 50504]

Subpart WWWW - "National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production"

The provisions of 40 CFR Part 63 Subpart WWWW, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart WWWW			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	April 21, 2003	[68 FR 19375]
Revision	Vol. 70	August 25, 2005	[70 FR 50118]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart XXXX - "National Emission Standards for Hazardous Air Pollutants: Rubber Tire Manufacturing"

The provisions of 40 CFR Part 63 Subpart XXXX, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart XXXX			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	July 9, 2002	[67 FR 45588]
Revision	Vol. 68	March 12, 2003	[68 FR 11745]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart YYYY - "National Emission Standards for Hazardous Air Pollutants for Stationary Combustion

Turbines”

The provisions of 40 CFR Part 63 Subpart YYYY, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart YYYY			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	March 5, 2004	[69 FR 10512]
Revision	Vol. 69	August 18, 2004	[69 FR 51184]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart ZZZZ - “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”

The provisions of 40 CFR Part 63 Subpart ZZZZ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart ZZZZ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	June 15, 2004	[69 FR 33474]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	January 18, 2008	[73 FR 3568]
Revision	Vol. 75	March 3, 2010	[75 FR 9648]
Revision	Vol. 75	June 30, 2010	[75 FR 37732]
Revision	Vol. 75	August 20, 2010	[75 FR 51570]
Revision	Vol. 76	March 9, 2011	[76 FR 12863]
Revision	Vol. 78	January 30, 2013	[78 FR 6674]
Revision	Vol. 78	March 6, 2013	[78 FR 14457]
Revision	Vol. 79	February 27, 2014	[79 FR 11228]

Subpart AAAAA - “National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants”

The provisions of 40 CFR Part 63 Subpart AAAAA, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart AAAAA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	January 5, 2004	[69 FR 394]

40 CFR Part 63 Subpart AAAAA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart BBBBB - "National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing"

The provisions of 40 CFR Part 63 Subpart BBBBB, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart BBBBB			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	May 22, 2003	[68 FR 27913]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	July 22, 2008	[73 FR 42529]

Subpart CCCCC - "National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks"

The provisions of 40 CFR Part 63 Subpart CCCCC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart CCCCC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	April 14, 2003	[68 FR 18008]
Revision	Vol. 69	October 13, 2004	[69 FR 60813]
Revision	Vol. 70	January 10, 2005	[70 FR 1670]
Revision	Vol. 70	August 2, 2005	[70 FR 44285]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart DDDDD - "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Industrial Boilers and Process Heaters"

The provisions of 40 CFR Part 63, Subpart DDDDD as originally published in the *Federal Register* and as subsequently amended upon publication in the *Federal Register* as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart DDDDD			
Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 69	September 13, 2004	[69 FR 55218]
Revision	Vol. 70	December 28, 2005	[70 FR 76918]
Revision	Vol. 71	April 20, 2006	[71 FR 20445]
Revision	Vol. 71	December 6, 2006	[71 FR70651]
Revision	Vol. 76	March 21, 2011	[76 FR 15608]
Revision	Vol. 76	May 18, 2011	[76 FR 28662]
Revision	Vol. 78	January 31, 2013	[78 FR 7138]

40 CFR Part 63 Subpart DDDDD			
Federal Register Citation	Volume	Date	Notice
Revision	Vol. 80	November 20, 2015	[80 FR 72789]

Subpart EEEEE - "National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries"

The provisions of 40 CFR Part 63 Subpart EEEEE, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart EEEEE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	April 22, 2004	[69 FR 21906]
Revision	Vol. 70	May 20, 2005	[70 FR 29400]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 73	February 7, 2008	[73 FR 7210]

Subpart FFFFF - "National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities"

The provisions of 40 CFR Part 63 Subpart FFFFF, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart FFFFF			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	May 20, 2003	[68 FR 27646]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	July 13, 2006	[71 FR 39579]

Subpart GGGGG - "National Emission Standards for Hazardous Air Pollutants: Site Remediation"

The provisions of 40 CFR Part 63 Subpart GGGGG, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart GGGGG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	October 8, 2003	[68 FR 58172]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	November 29, 2006	[71 FR 69011]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart HHHHH - "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing"

The provisions of 40 CFR Part 63 Subpart HHHHH, as originally published in the Federal Register and

as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart HHHHH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	December 11, 2003	[68 FR 69164]
Revision	Vol. 68	December 29, 2003	[68 FR 75033]
Revision	Vol. 70	May 13, 2005	[70 FR 25676]
Revision	Vol. 70	July 6, 2005	[70 FR 38780]
Revision	Vol. 70	December 21, 2005	[70 FR 75924]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]
Revision	Vol. 71	October 4, 2006	[71 FR 58499]
Revision	Vol. 73	December 22, 2008	[73 FR 78199]

Subpart IIIII - "National Emission Standards for Hazardous Air Pollutants: Mercury Emissions from Mercury Cell Chlor-Alkali Plants"

The provisions of 40 CFR Part 63 Subpart IIIII, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart IIIII			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	December 19, 2003	[68 FR 70904]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart JJJJJ - "National Emission Standards For Hazardous Air Pollutants For Brick And Structural Clay Products Manufacturing"

The provisions of ~~Title~~ 40 CFR Part 63, Subpart JJJJJ, as originally published in the *Federal Register* and as subsequently amended upon publication in the *Federal Register* as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart JJJJJ			
Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 68	May 16, 2003	[68 FR 26690]
Revision	Vol. 68	May 28, 2003	[68 FR 31744]
Revision	Vol. 71	April 20, 2006	[71 FR 20445]
Revision	Vol. 71	June 23, 2006	[71 FR 36014]
Revision	Vol. 80	October 26, 2015	[80 FR 65469]

Subpart KKKKK - "National Emission Standards For Hazardous Air Pollutants For Clay Ceramics Manufacturing"

The provisions of ~~Title~~ 40 CFR Part 63, Subpart KKKKK, as originally published in the *Federal Register* and as subsequently amended upon publication in the *Federal Register* as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart KKKKK			
Federal Register Citation	Volume	Date	Notice
Original Promulgation	Vol. 68	May 16, 2003	[67 FR 26690]
Revision	Vol. 68	May 28, 2003	[68 FR 31744]
Revision	Vol. 71	April 20, 2006	[71 FR 20445]
Revision	Vol. 71	June 23, 2006	[71 FR 36014]
Revision	Vol. 80	October 26, 2015	[80 FR 65469]
Revision	Vol. 80	December 4, 2015	[80 FR 75817]

Subpart LLLLL - "National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing"

The provisions of 40 CFR Part 63 Subpart LLLLL, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart LLLLL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	April 29, 2003	[68 FR 22976]
Revision	Vol. 68	May 7, 2003	[68 FR 24562]
Revision	Vol. 70	May 17, 2005	[70 FR 28360]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart MMMMM - "National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations"

The provisions of 40 CFR Part 63 Subpart MMMMM, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart MMMMM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	April 14, 2003	[68 FR 18062]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart NNNNN - "National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production"

The provisions of 40 CFR Part 63 Subpart NNNNN, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart NNNNN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	April 17, 2003	[68 FR 19076]
Revision	Vol. 71	April 7, 2006	[71 FR 17738]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart OOOOO - [Reserved]

Subpart PPPPP - "National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands"

The provisions of 40 CFR Part 63 Subpart PPPPP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart PPPPP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	May 27, 2003	[68 FR 28774]
Revision	Vol. 68	August 28, 2003	[68 FR 51830]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart QQQQQ - "National Emission Standards for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities"

The provisions of 40 CFR Part 63 Subpart QQQQQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart QQQQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 67	October 18, 2002	[67 FR 64498]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart RRRRR - "National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing"

The provisions of 40 CFR Part 63 Subpart RRRRR, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart RRRRR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	October 30, 2003	[68 FR 61868]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart SSSSS - "National Emission Standards for Hazardous Air Pollutants for Refractory Products Manufacturing"

The provisions of 40 CFR Part 63 Subpart SSSSS, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart SSSSS			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	April 16, 2003	[68 FR 18730]
Revision	Vol. 71	February 13, 2006	[71 FR 7415]
Revision	Vol. 71	April 14, 2006	[71 FR 19435]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart TTTTT - "National Emissions Standards for Hazardous Air Pollutants for Primary Magnesium Refining"

The provisions of 40 CFR Part 63 Subpart TTTTT, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart TTTTT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 68	October 10, 2003	[68 FR 58615]
Revision	Vol. 71	April 20, 2006	[71 FR 20446]

Subpart UUUUU - "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units"

The provisions of 40 CFR Part 63 Subpart UUUUU, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart UUUUU			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 77	February 16, 2012	[77 FR 9304]
Revision	Vol. 77	April 19, 2012	[77 FR 23399]
Revision	Vol. 77	August 2, 2012	[77 FR 45967]
Revision	Vol. 78	April 24, 2013	[78 FR 24073]
Revision	Vol. 79	November 19, 2014	[79 FR 68777, 68795]
Revision	Vol. 80	March 24, 2015	[80 FR 15510]

Subpart VVVVV - [Reserved]

Subpart WWWWW - "National Emission Standards for Hospital Ethylene Oxide Sterilizers"

The provisions of 40 CFR Part 63 Subpart WWWWW, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart WWWWW			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	December 28, 2007	[72 FR 73611]

Subpart XXXXX - [Reserved]

Subpart YYYYY - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities"

The provisions of 40 CFR Part 63 Subpart YYYYY, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart YYYYY			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	December 28, 2007	[72 FR 74088]
Revision	Vol. 73	December 1, 2008	[73 FR 72727]
Revision	Vol. 74	February 26, 2009	[74 FR 8756]
Revision	Vol. 80	June 24, 2015	[80 FR 36247]

Subpart ZZZZZ - "National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources"

The provisions of 40 CFR Part 63 Subpart ZZZZZ, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart ZZZZZ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	January 2, 2008	[73 FR 226]

Subpart AAAAAA - [Reserved]

Subpart BBBBBB - "National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities"

The provisions of 40 CFR Part 63 Subpart BBBBBB, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart BBBBBB			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	January 10, 2008	[73 FR 1916]
Revision	Vol. 73	March 7, 2008	[73 FR 12275]
Revision	Vol. 76	January 24, 2011	[76 FR 4156]

Subpart CCCCCC - "National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Dispensing Facilities"

The provisions of 40 CFR Part 63 Subpart CCCCCC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart CCCCCC			
Federal Register Citation	**Volume**	**Date**	**Notice**

40 CFR Part 63 Subpart CCCCCC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	January 10, 2008	[73 FR 1916]
Revision	Vol. 73	March 7, 2008	[73 FR 12275]
Revision	Vol. 73	June 25, 2008	[73 FR 35939]
Revision	Vol. 76	January 24, 2011	[76 FR 4156]

Subpart DDDDDD - "National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources"

The provisions of 40 CFR Part 63 Subpart DDDDDD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart DDDDDD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	January 23, 2007	[72 FR 2930]
Revision	Vol. 77	April 17, 2012	[77 FR 22848]
Revision	Vol. 80	February 4, 2015	[80 FR 5938]

Subpart EEEEEE - "National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting Area Sources"

The provisions of 40 CFR Part 63 Subpart EEEEEE, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart EEEEEE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	January 23, 2007	[72 FR 2930]
Revision	Vol. 72	July 3, 2007	[72 FR 36363]

Subpart FFFFFF - "National Emission Standards for Hazardous Air Pollutants for Secondary Copper Smelting Area Sources"

The provisions of 40 CFR Part 63 Subpart FFFFFF, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart FFFFFF			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	January 23, 2007	[72 FR 2930]
Revision	Vol. 72	July 3, 2007	[72 FR 36363]

Subpart GGGGGG - "National Emission Standards for Hazardous Air Pollutants for Primary Nonferrous Metals Area Sources—Zinc, Cadmium, and Beryllium"

The provisions of 40 CFR Part 63 Subpart GGGGGG, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart GGGGGG			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	January 23, 2007	[72 FR 2930]

Subpart HHHHHH - "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources"

The provisions of 40 CFR Part 63 Subpart HHHHHH, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart HHHHHH			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	January 9, 2008	[73 FR 1738]
Revision	Vol. 73	February 13, 2008	[73 FR 8408]

Subpart IIIIII - [Reserved]

Subpart JJJJJJ - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers"

The provisions of 40 CFR Part 63 Subpart JJJJJJ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart JJJJJJ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 69	September 13, 2004	[69 FR 55217]
Revision	Vol. 70	December 28, 2005	[70 FR 76918]
Revision	Vol. 71	December 6, 2006	[71 FR 70651]
Revision	Vol. 76	March 21, 2011	[76 FR 15554]
Revision	Vol. 76	March 21, 2011	[76 FR 15608]
Revision	Vol. 76	May 18, 2011	[76 FR 28662]
Revision	Vol. 78	January 31, 2013	[78 FR 7138]
Revision	Vol. 78	February 1, 2013	[78 FR 7488]

Subpart KKKKKK - [Reserved]

Subpart LLLLLL - "National Emission Standards for Hazardous Air Pollutants for Acrylic and Modacrylic Fibers Production Area Sources"

The provisions of 40 CFR Part 63 Subpart LLLLLL, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart LLLLLL			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 73	March 26, 2008	[73 FR 15923]

Subpart MMMMMM - "National Emission Standards for Hazardous Air Pollutants for Carbon Black Production Area Sources"

The provisions of 40 CFR Part 63 Subpart MMMMMM, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart MMMMMM			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 73	March 26, 2008	[73 FR 15923]

Subpart NNNNNN - "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources: Chromium Compounds"

The provisions of 40 CFR Part 63 Subpart NNNNNN, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart NNNNNN			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 73	March 26, 2008	[73 FR 15923]

Subpart OOOOOO - "National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources"

The provisions of 40 CFR Part 63 Subpart OOOOOO, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart OOOOOO			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 73	March 26, 2008	[73 FR 15923]

Subpart PPPPPP - "National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources"

The provisions of 40 CFR Part 63 Subpart PPPPPP, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart PPPPPP			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 73	March 26, 2008	[73 FR 15923]

Subpart QQQQQQ - "National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources"

The provisions of 40 CFR Part 63 Subpart QQQQQQ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart QQQQQQ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	July 16, 2007	[72 FR 38864]
Revision	Vol. 73	March 26, 2008	[73 FR 15923]

Subpart RRRRRR - "National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing Area Sources"

The provisions of 40 CFR Part 63 Subpart RRRRRR, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart RRRRRR			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	December 26, 2007	[72 FR 73180]

Subpart SSSSSS - "National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources"

The provisions of 40 CFR Part 63 Subpart SSSSSS, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart SSSSSS			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	December 26, 2007	[72 FR 73180]

Subpart TTTTTT - "National Emission Standards for Hazardous Air Pollutants for Secondary Nonferrous Metals Processing Area Sources"

The provisions of 40 CFR Part 63 Subpart TTTTTT, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart TTTTTT			
Federal Register Citation	**Volume**	**Date**	**Notice**

40 CFR Part 63 Subpart TTTTTT			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 72	December 26, 2007	[72 FR 73180]

Subpart UUUUUU - [Reserved]

Subpart VVVVVV - "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources"

The provisions of 40 CFR Part 63 Subpart VVVVVV, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart VVVVVV			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 74	October 29, 2009	[74 FR 56008]
Revision	Vol. 75	December 14, 2010	[75 FR 77760]
Revision	Vol. 76	March 14, 2011	[76 FR 13514]
Revision	Vol. 77	December 21, 2012	[77 FR 75740]

Subpart WWWWWW - "National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations"

The provisions of 40 CFR Part 63 Subpart WWWWWW, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart WWWWWW			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	July 1, 2008	[73 FR 37728]
Revision	Vol. 76	June 20, 2011	[76 FR 35744]
Revision	Vol. 76	September 19, 2011	[76 FR 57913]

Subpart XXXXXX - "National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories"

The provisions of 40 CFR Part 63 Subpart XXXXXX, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart XXXXXX			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 73	July 23, 2008	[73 FR 42978]

Subpart YYYYYY - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Ferroalloys Production Facilities"

The provisions of 40 CFR Part 63 Subpart YYYYYY, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart YYYYYY			
Federal Register Citation	**Volume**	**Date**	**Notice**
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Subpart ZZZZZZ - "National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries"

The provisions of 40 CFR Part 63 Subpart ZZZZZZ, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart ZZZZZZ			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 74	June 25, 2009	[74 FR 30366]
Revision	Vol. 74	September 10, 2009	[74 FR 46493]

Subpart AAAAAAA - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing"

The provisions of 40 CFR Part 63 Subpart AAAAAAA, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart AAAAAAA			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 74	December 2, 2009	[74 FR 63236]
Revision	Vol. 75	March 18, 2010	[75 FR 12988]

Subpart BBBBBBB - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Chemical Preparations Industry"

The provisions of 40 CFR Part 63 Subpart BBBBBBB, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart BBBBBBB			
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Original Promulgation	Vol. 74	December 30, 2009	[74 FR 69194]

Subpart CCCCCCC - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing"

The provisions of 40 CFR Part 63 Subpart CCCCCCC, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart CCCCCCC			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 74	December 3, 2009	[74 FR 63504]
Revision	Vol. 75	March 5, 2010	[75 FR 10184]
Revision	Vol. 75	June 3, 2010	[75 FR 31317]

Subpart DDDDDDD - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing"

The provisions of 40 CFR Part 63 Subpart DDDDDDD, as originally published in the Federal Register and as subsequently amended upon publication in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart DDDDDDD			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 75	January 5, 2010	[75 FR 522]
Revision	Vol. 75	July 20, 2010	[75 FR 41991]
Revision	Vol. 76	December 23, 2011	[76 FR 80261]

Subpart EEEEEEE - "National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category"

The provisions of 40 CFR Part 63 Subpart EEEEEEE, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart EEEEEEE			
Federal Register Citation	**Volume**	**Date**	**Notice**
Original Promulgation	Vol. 76	February 17, 2011	[76 FR 9450]

Subpart FFFFFFF - [Reserved]

Subpart GGGGGGG - [Reserved]

Subpart HHHHHHH - "National Emission Standards for Hazardous Air Pollutant Emissions for Polyvinyl Chloride and Copolymers Production"

The provisions of 40 CFR Part 63 Subpart HHHHHHH, as originally published in the Federal Register as listed below, are incorporated by reference as if fully repeated herein.

40 CFR Part 63 Subpart HHHHHHH			
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Original Promulgation	Vol. 77	April 17, 2012	[77 FR 22848]

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Vol. 25, Issue No. 10, (Doc. No. 2648), October 26, 2001;
Vol. 26, Issue No. 8, (Doc. No. 2736), August 23, 2002;
Vol. 27, Issue No. 6, (Doc. No. 2840), June 27, 2003;
Vol. 28, Issue No. 9, (Doc. No. 2913), September 24, 2004;
Vol. 29, Issue No. 8, (Doc. No. 2980), August 26, 2005;
Vol. 30, Issue No. 9, (Doc. No. 3066), September 22, 2006;
Vol. 31, Issue No. 12, (Doc. No. 3153), December 28, 2007;
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Vol. 33, Issue No. 10, (Doc. No. 4082), October 23, 2009;
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Vol. 34, Issue No. 11, (Doc. No. 4131), November 26, 2010;
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Vol. 37, Issue No. 4, (Errata), April 26, 2013;
Vol. 37, Issue No. 5, (Errata), May 24, 2013;
Vol. 37, Issue No. 12, (Doc. No. 4387), December 27, 2013;
Vol. 38, Issue No. 6, (Doc. No. 4388), June 27, 2014;
Vol. 38, Issue No. 8, (Errata), August 22, 2014;
Vol. 38, Issue No. 9, (Doc. No. 4465), September 26, 2014;
Vol. 39, Issue No. 11, (Doc. No. 4577), November 27, 2015.
Vol. 40, Issue No. 9, (Doc. No. 4650), September 23, 2016.